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THE PROGRAMME FOR STANDARDISATION

THE first Report of the Standardisation Committee of the Ministry of Works,* numbering over 40 members, mainly architects, engineers and surveyors, with Mr. Sydney Tatchell as chairman, is intended to lay down the general range that standards should cover rather than to define exactly what dimensions should be adopted for the various elements employed in building work. The decisions in most cases are to be made by the British Standards Institution, to which the recommendations in this Report have been passed on, so that in their final form they will appear in the Standard Specifications. By adopting this course, it is considered that the new standards will have the full support of all sides of industry, as well as of the professions.

It is emphasised that a sufficient output of materials and components to meet post-war needs depends essentially on a limited range of standards, and that under the present circumstances it would be most undesirable to contemplate the manufacture of many varied sizes and designs. It is important to provide for a large output at economic rates in order to meet the type of demand that housing of all kinds is expected to make at an early date.

The Report is arranged in three sections, classified alphabetically: the first, Materials; the second, Components; and the third, Drawing Office Practice. It may be noted that in a few cases such as brickwork, tiling, window and door openings, existing standards are accepted, but in practically all others the dimensions remain to be defined; though, of course, in many cases they are obviously quite well known. The main objects of the Committee's work are set out as follows: To secure that, from the consumer's standpoint, materials conform to recognised tests ensuring efficiency, and components are suited to their purpose, satisfactory in appearance, durable and appropriate for health, convenience and safety. The producer requirements are regarded as economy in the use of labour, materials and tools, and that the building elements conform to dimensional types permitting of interchangeability and ready replacement.

At this point, it may be as well to consider one or two difficulties that arise, more especially in the case of sanitary fittings. The tapered bath, though perhaps inferior in appearance to the parallel-sided one, effects a water saving of some 15 per cent., an important matter when the water is heated; it should be included as an alternative to those shown. The architect has often, in practice, taken part in an animated discussion on the proper height for sinks and basins, as there is a difference of some four inches between what is convenient for a short person and a tall one. Of course, an average has to be struck, but whatever it is, there will be criticism; this has sometimes been met by the provision of a grid platform for the short, and an "office stool" with a saddle-shaped seat for the ultra-tall.

The section dealing with drawing office practice will naturally possess an interest for the architect; it aims at as much uniformity as is practicable in the presentation of working drawings, which would of course be a convenience to those who have to read them. It offers a series of symbols, mostly for sanitary work, which might well be supplemented by those for different materials, and for the electrician, now that colours are no longer in use for this purpose. The proposals for filing drawings, either flat or folded, are worth attention.

The more comprehensive aspects of prefabrication are reserved for Appendix, the previous parts of the Report dealing only with the components employed in building work as separate items. Now we are invited to consider them in groups forming complete units. It is pointed out that for some time past, practice has tended towards factory production both for woodwork, plumbing and other fitments. The expansion of these methods, leading step by step towards a programme involving only the assembly of the prepared material on the site to produce a completed building, is reviewed in respect to its bearings on standardised forms and their dimensions. The point is made in this Report in favour of such developments that work done under factory conditions has the advantage over that in the open-air in allowing of a more exact control of quality, greater precision and easier testing of workmanship. It also extends the field from which labour can be drawn, and uses this concurrently on a number of processes independently of weather conditions; moreover, the employment of dry building processes eliminates the delay occurring when wet processes are used.

The use of new substitutes or alternative methods, it is admitted, can only be justified if they reduce cost, shorten time, draw on additional labour, or improve standards—or secure one or more of these advantages. For the more detailed consideration of these aspects we are referred to the Report of the Inter-departmental Committee on House Construction (reviewed in our issue of March 31). The question is only touched on in this case as affecting the demands made on standardised dimensions in the design of buildings to be assembled from factory-produced elements. The Committee does not take the matter of indicating standards to be employed in planning any further at the moment, but closes with a hint that when more information as to the progress made by various interested industries is available they will be able to add to their recommendations on more definite lines.

* M.O.W. The Use of Standards in Building. H.M. Stationery Office. 6d.

NOTES AND NEWS

R.I.B.A. National Planning Scheme.

THE announcement that the R.I.B.A. hopes to produce in the autumn the first national scheme for the planned use of land was made by Mr. Percy Thomas, P.R.I.B.A., in opening a Rebuilding Britain exhibition in the City Art Gallery at Leeds recently. It would, he said, be only a sketch plan, but he hoped that it would encourage others interested in rebuilding Britain, and eventually a Government Department, to prepare "blueprints" on which the development of the country would be based. This country, he said, was entitled to the finest designs, the best construction and the highest qualities of craftsmanship. Reconstruction included other things besides the building of houses. Schools, public buildings and workshops, all had to be considered. Although the housing problem immediately after the war might have to be met by the use of prefabricated buildings, there must not be contentment to face a future of temporary steel and concrete buildings.

The R.A.F. Chapel, Westminster Abbey.

THE memorial window for the Royal Air Force Chapel in Westminster Abbey—the "Battle of Britain Memorial"—will be designed and made by Commander Hugh Easton. Mr. Easton has designed the American memorial to King George V in Winchester Cathedral and has executed work in Exeter, Ely, Canterbury, Durham, and Ypres Cathedrals.

Winchester Cathedral.

THE Dean and Chapter of Winchester have invited Sir Charles Peers, F.B.A., F.R.I.B.A., to act as consultant in regard to the future treatment of the north churchyard and their properties adjoining it. Improvement of the north and north-east sides of the cathedral has been under consideration for some time, and some steps to this end were taken before the war. The Dean and Chapter regard the site as of such historical and architectural interest to people from all parts of the world as to call for the best advice available.

The M.o.W. Factory-made House.

IN response to requests, a few special reprints have been made of the M.o.W. Emergency Factory-made House (the Churchill House), showing exterior and interior views, plans, etc. These can be obtained from the Publisher, *The Builder*, Ltd., 4, Catherine-street, Aldwych, W.C.2, price 1s. 3d. post free.

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Mr. Casson's Drawings.

MR. HUGH CASSON, M.A., A.R.I.B.A., has an exhibition of drawings and water-colours at the Architectural Association (closing to-day). His technique is a thin wavy irregular line with a transparent wash of tone or colour, which has its effectiveness. Mr. Casson's drawings have captured the character of the Cotswold buildings and their atmosphere. Those making the strongest appeal are No. 15, St. Edward's, Stow-on-the-Wold; No. 19, Cadets Drilling, Stratford; No. 26, Control Caravan; No. 29, Temple Bar; No. 11, Cottages, near Stow; No. 50, Chipping Campden; and No. 41, Regent Store, Cheltenham.

The Epstein Exhibition.

A CORRESPONDENT writes: "There are many who do not like Epstein's large work, but few can fail to admire his portrait heads and busts, which are full of vitality. These comments refer especially to the following works now on exhibition at the Leicester Galleries: No. 8, Study for a Portrait; No. 12, 'Juanita'; No. 13, 'Leda'; No. 17, 'Ragamuffin' (a typical alert gamin); No. 19, 'Deirdre,' leaning forward; No. 20, D. N. Pritt, K.C., M.P., a fine head, well recorded.

"The principal exhibit, No. 1, 'Girl with the Gardenias,' is of a bronze female figure lightly clad in a clinging diaphanous material which shows the lines of the figure. Gardenias hang from this drapery and the hand proffers a bloom. The post conveys an easy, graceful step. The model is not of everyday type; the features may appear a little large, but they are in harmony with the figure generally. It is a fine work. Epstein's art is outstanding; few, if any, surpass him to-day. No unnecessary trimmings detract from his subject, which is always the thing that counts."

Investigation of Building Costs.

A DEPUTATION from the National Federation of Building Trades Employers, headed by Mr. Leslie Wallis, J.P., immediate Past-President, was received at the House of Commons last week by the Select Committee on National Expenditure, which is at present investigating the question of war-time building costs. Mr. Norman Wates (London), Mr. W. H. Nicholls (South-Western), and Mr. R. O. Lloyd (Liverpool) were with Mr. Wallis.

Housing Director for Glasgow.

THE Housing Committee of Glasgow Corporation have agreed unanimously to recommend the appointment of Mr. Ronald Bradbury, B.A.(Arch.), M.Sc., A.R.I.B.A., of Manchester, to the post of Director of Housing in Glasgow. He is 36.

Post-War Housing, Bournville.

THE Bournville Village Trust are preparing schemes for the erection of houses immediately after the war. Manufacturers and others who have developed systems for the rapid construction of permanent houses are invited to send full details to the Secretary and Manager, Estate Office, Bournville, Birmingham, 30.

From *The Builder* of 1844

Saturday, May 25, 1844. Price 3d.

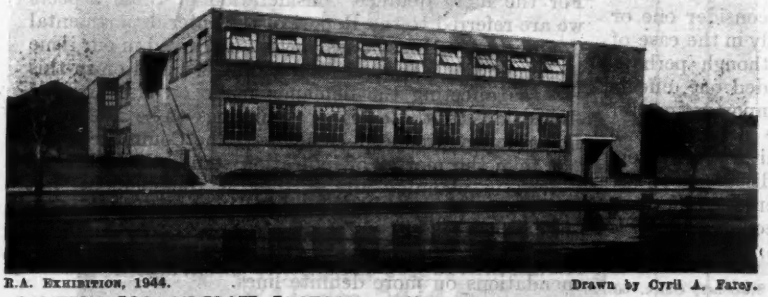
RAILWAY OVER THE MENAI STRAITS.—We noticed the project of carrying the Chester and Holyhead Railway over the Menai bridge, but we now learn that the landed proprietors in the vicinity oppose the railway, and it is therefore probable the passage across the Straits will have to be made at the Britannia Rock, and will involve at least two arches of 350 ft. span. This will be the most gigantic railway work ever undertaken.

COMPETITION NEWS

A LONDON AIRPORT.

THE R.I.B.A. have collaborated in preparing the final conditions of the competition for an International Airport for London promoted by *The Aeroplane*. The assessors are Mr. Austin Blomfield, M.A., F.R.I.B.A., Dr. H. Roxbee Cox, Air Vice-Marshal D. C. T. Bennett, Mr. W. R. Verdon Smith, and Mr. Dennis H. Handover. Prizes of £500, £100 and £50 are offered. The closing date is December 31 next (overseas entries February 16, 1945). Questions must reach the promoters, *The Aeroplane*, Bowling Green-lane, London, E.C.1, by July 1 (August 12 for overseas competitors), and conditions are obtainable from the same address.

The conditions do not visualise any specific site, but assume the following characteristics: (a) generally level; (b) not in a built-up area; (c) with rail and road communications to London; (d) of an area not greater than 20 square miles. The scheme should be prepared to take the largest aircraft visualised for trans-ocean and world-wide air services, while still allowing for the smaller aircraft operating to British and European airports. It should include an artificial lake for flying-boats.



R.A. EXHIBITION, 1944. Drawn by Cyril A. Farey.

CANTEEN FOR AIRCRAFT FACTORY. HOWARD V. LOBB, F.R.I.B.A., ARCHITECT.

BUILDING COSTS BETWEEN THE WARS

1.—RETROSPECTIVE REFLECTIONS

By S. HOOKWAY, F.S.I.

WHILST the prosecution of the war is, of course, the chief concern of these days, planning the post-war runs it a close second, and many are preoccupied with plans for reconstruction, of which one of the major aspects, and the one that causes most concern, particularly with regard to rehousing, is the anticipated cost. The preoccupation will resolve itself more and more into a defined problem as the war draws towards its conclusion. The point has been constantly made that the country is getting uneasy that those to whom the planning has been entrusted do not appear yet to have progressed far beyond the contemplative stage, except as regards certain temporary measures, and it is freely asserted that the echo of applause for good management of the war effort will not be mistaken for supporting cheers for a Government that has not its plans ready—ready will not even be enough, but operating—for the rehabilitation of the returning Servicemen.

The problem is not a new one, and those whose job it is to draft the legislation towards its solution should not need to be reminded that all this has happened before, and that a repetition of the mistakes and vacillations of a quarter-century ago will not be met with quiet toleration. The lesson is there for all to study. History is repeating itself. It is not even a variation on the old theme; it is *dal segno* of the same theme—"that strain again."

I recently picked up at random a copy of *The Builder* dated June, 1919. In that single issue the comments and reports on a variety of topics were so apt to present-day affairs that many a paragraph could well be lifted across 25 years and set up in type again and would pass as current commentary.

Here is Mr. Bonar Law, presiding at a Housing Conference at the Central Hall, June, 1919 . . . "his object was to impress upon them that the need for national effort was as great now as at any time during the war. Not a day should be lost in doing everything that could be done to get houses built . . . they must satisfy the nation that the Government were doing everything in their power to remedy one of the greatest evils of our time." Here is Dr. Addison at the same conference: "They had great difficulties regarding materials, but so far as the major materials of building were concerned, there was now available through the Ministry of Supply sufficient to build many more houses than the plans already submitted would require."

Here is a report from Poplar, a perfect echo across the years: "A deputation recently submitted a scheme for the rebuilding of property at Poplar which was wrecked by air raids last year. It was stated that 65 houses which had suffered were still in a derelict condition." And do you desire a comment on the output of present-day labour? From the report of a Building Industry Conference in 1919 we can cull a remark deprecating "the demoralising effect of war conditions upon labour, when good, bad and indifferent workmen alike have been assured of constant work at high wages," and much more in the same tenor.

In lighter vein here is a thought for the "House of the Future" that is often re-echoed to-day: "Is there going to be a revival of the love of home life? Will the majority want houses of their own? Will the munition lady discard her furs for the housemaid's cap and apron? Will the communistic idea compel us to share kitchens?" We can be even more topical than that—and I am quoting from the same 1919 copy—for here is a commentary, 25 years ahead of its time, applicable to the 1944 Report of the Building Mission to the U.S.A. "If America can pay high wages, why cannot Great Britain do the same? Answer: American wages may be all right for American methods, but American wages with British methods means trouble."

These quotations are not mere coincidence. The same repetition is in evidence at any time in the decade 1919-29. Here is another random pick-up, June, 1921. Opening up at the editorial comment, we might find this appearing again in the near future with equal aptness: "When peace came it found us with thoroughly ill-balanced minds on matters of finance. We had become so used to thinking in millions that, regardless of our debts, we were ready to embark on anything to inaugurate the new Utopia. Mushroom ministries continued to flourish, and Government staffs were multitudinous. Interest in education was revived by the Education Act, which had every appearance of providing fruitful material development. . . ." Or pass along over another few years, and, picked at random again, in 1924, here are a few excerpts from a leading article entitled "The Political House," an article that could well be wholly requoted: ". . . The main ideals [about rehousing] may not have gone, but they have become obscured in a welter of statement upon ways and means. . . . We assume that a certain number of houses must be built urgently, but we know they are bound to be a financial failure under existing conditions, regardless of any political Party. . . . It is by no means certain that an ambitious and permanent form of building is the correct solution for the existing conditions. . . ."

The history of the hopes and fears, the experiments, the achievements and failures of those years is on record. Social progress, we are told, is the result as much of an adequate recognition of the mistakes of the past as of applying to our problems the positive achievement of the present. If planning for the future is not guided by a knowledge and recognition of the errors of the past there is no real progress, and the achievements of science and research, for all their intrinsic merits, are of little worth in a society that will not grow up, that is content to return again to outworn politics and outmoded economics. We do not consider building petrol engines into postchaises.

We have had a spate of Reports and White Papers published to enlighten us as to what is being done, and what should be done, and what will have to be done before what should be done can be attempted, and so forth. What would be equally enlightening would be a *résumé* of what has gone before, a chart, as it were, of the journey we travelled last time on the same pursuit in the ten years or so from 1919 onwards. Politicians have notoriously short memories, and so in the main have the people who elect them.

Much play has recently been made with statistics concerning the number of houses built between the wars. But that is only half the story; the difficulties that beset the planners, and how and why they were belaboured with inflated building costs in the early years after the last war, should be retold. It would serve as a steadying influence on those who would be leading us down the same old paths again. What is to be avoided is as important as what has to be grappled with. The snowball costs of 1920-21 that led to so many abandoned schemes are a red light that should be reflected across the quarter-century. Passages like the following should be recalled and underlined: "Sir A. Mond, replying to a question in the House of Commons [June, 1921] said that *in view of the altered economic and financial circumstances of the country he had felt compelled to take steps to limit the provision of new houses to the minimum requirements. He could not at present estimate the liability which might be incurred in connection with abandoned schemes.*" In the same issue of *The Builder* from which the above is taken we find reports of various housing committees deciding not to proceed with schemes already sanctioned, refusing to sanction tenders, and deciding to sell sites already purchased.

These retrospective reflections lead me to think that it may be of interest and instructive to rediscover the trend of the building costs that went hand in hand with the story of those days; to see what happened to the costs to account for confessions of failure such

COMING EVENTS

Saturday, May 27.

INSTITUTE OF QUANTITY SURVEYORS. N.W. Branch Annual Meeting. "White Hart" Hotel, Warrington. 3.30 p.m.

Tuesday, May 30.

HOUSING CENTRE. Sir Harry Selley, M.P., on "Conservative Party's Housing and Town Planning Policy." 13, Suffolk-street, S.W.1. 1.15 p.m. (buffet lunch, 12.45 p.m.).

Friday, June 2.

ECCLESIOLOGICAL SOCIETY. National Conference on Post-War Archæology (British Buildings). At Institute of Archæology, Regent's Park, N.W. (continuing over Saturday and Sunday).

Wednesday, June 7.

L.M.B.A. (CENTRAL AREA, No. 5). Mr. H. C. Harland to speak. Zeeta, Berkeley Rooms, Putney. 12.45 p.m.

as those recalled above; and to note what readjustments took place that enabled a partial success, at any rate, to be won from what at one time appeared a hopeless situation.

It will not be possible in the limits of a short article to deal with the whole subject exhaustively, but an attempt will be made to condense the basic information by taking house building as a typical example (embracing, as it does, features from every trade), and analysing the costs at intervals between the wars, in relation to the 1914 datum.

(To be continued.)

"COMMON WEALTH" AND HOUSING

MR. ALAN SLATER ON ITS POLICY.

At 13, Suffolk-street, S.W.1, the Housing Centre is having a series of addresses in which representatives of various political Parties express their views on the housing question. On Tuesday, May 16, Mr. Alan Slater, F.R.I.B.A., spoke for the Common Wealth Party.

Mr. Ambrose Appelbe presided.

The lecturer said that the necessity of State ownership of the land was self-evident. But here the transfer of ownership involved the question of compensation. Common Wealth held that the owner should be compensated, but the compensation should be in proportion to his needs, and the Duke of Westminster would not receive anything like the same scale of compensation as would the owner of a small freehold plot purchased through personal sacrifice. Common Wealth considered this to be of vital importance, because only by the general acknowledgment of the justice of this attitude could we destroy the existing relationship in the realm of compensation values as between life and property. As things were now, the compensation for the total disablement of a conscripted soldier was a life pension of £2 a week, whereas that attributable to loss of property was based on the market value of March, 1939. Until this distortion of values was publicly acknowledged there was little likelihood of the realisation of a new world order with the common man—to use the Prime Minister's words—marching to his true and just inheritance.

The lecturer dealt with four points in his address, viz.: (1) The attempt by the Government to divorce housing from planning; (2) the place of private enterprise in solving the housing problem; (3) the position of building societies in post-war housing; and (4) the short-term and long-term programme and the prefabricated house.

On the first of these points Mr. Slater said that housing and planning could not be divorced without peril: there should be a central planning authority with superior powers to those of any Ministry; but the present Government had resolutely turned its face against the whole conception of such a body. The divorce of housing from planning had produced the Dagenhams of to-day. Were we to give up the conception of neighbourhood units, each complete with the cultural requirements for a full life, or the other conception of relating the place where a man worked with that where he lived?

As to private enterprise, Common Wealth definitely believed this was incapable of undertaking and carrying through the rebuilding of Britain in a manner worthy of the nation. Between the wars its activities had been largely confined to building middle-class houses for sale, and it had touched with suspicion and some contempt the demand for houses to rent at reasonable prices to the working class. Private enterprise was impatient of control, and therefore opposed to positive planning, because this inevitably implied control. As an instrument of building Common Wealth recommended a national building corporation, operating as a democratically controlled production force.

Of the building societies Mr. Slater said that an attempt was being made to form a triumvirate of building societies, big contractors and architects. The bait offered to architects was apparently "All houses to be designed by architects." This was a desirable situation in many ways, but not if accompanied by "All finance through building societies" and "All building works by the big boys of the Employers' Federation."

Of his fourth point the lecturer said that Common Wealth had always stood for the necessity of a short-term programme involving prefabricated houses built in great numbers—up to a million within two or three years after the armistice. Lord Portal's effort in this direction was welcomed, though in numbers, speed of erection and detailed design Common Wealth hoped that improvements would be forthcoming. But this short-term programme was only advocated if at the same time preparations were made to plan and reconstruct on the widest scale. It must take time to marshal and resolve all the immensely divergent problems of our reconstructed post-war world, and this could only be done if an agreed economic and social policy was arrived at. Now was the time when that agreement should be beginning to be achieved: if it was not, these houses, acknowledged now as being temporary, might have their time period indefinitely extended.

Of the model prefabricated house now being exhibited, Mr. Slater said he thought it adequate for its temporary purpose, with perhaps one or two minor adjustments. But Common Wealth was not satisfied that the numbers required would be forthcoming. Nor did it think it advisable to hand over the main constructive elements of this enormous scheme to the steel industry, with its already semi-monopolistic tendency. Common ownership of the means of production was required to prevent the people being exploited.

With regard to prefabrication in the long-term policy, the lecturer said it appeared to him highly probable that with sufficient unbiased scientific research the prefabricated house could take its place alongside that of a more traditional method of construction. But, again, unless there was common ownership of the means of production there were grave dangers of friction as a direct consequence of the employment of unskilled and female labour in opposition to that of the craftsmen as trade unions knew them to-day.

A discussion followed.

The Chairman announced that a representative of the Conservative Party would deliver the lecture on Tuesday, May 30.

R.A. Exhibition, 1944. Drawn by Morris Jones.

POST-WAR TERRACE HOUSES. EDWARD D. MILLS, A.R.I.B.A., ARCHITECT.

R.I.B.A.

Membership.

On May 16, the following members were elected :—

As Fellows.

F. E. Towndrow (London).
W. C. Young (Manchester).
G. M. J. Taylor (Mrs. R. A. Gerrard) (Bath).

As Associates.

H. E. Burden, D.A. (Edin.) (Edinburgh Coll. of Art) (Stirling).
A. A. Hershman (Salford, Lancs).
E. H. Jamilly, Dip. Arch. (Poly., Regent-street, London) (Rudgwick, Sussex).
W. T. Jeffries (Watford, Herts).
Miss M. H. Lawrie (Edinburgh Coll. of Art) (Alness, Rossshire).
R. J. H. Nathanielsz (Poly, Regent-street, London) (Harrow-on-the-Hill, Middlesex).
W. R. Orme (Twickenham, Middlesex).
W. F. Stewart, B.Sc. (Glasgow Sch. of Arch.) (Abington, (Lanarks).
F. E. S. Storer (Birmingham).
T. A. Sutcliffe (London).

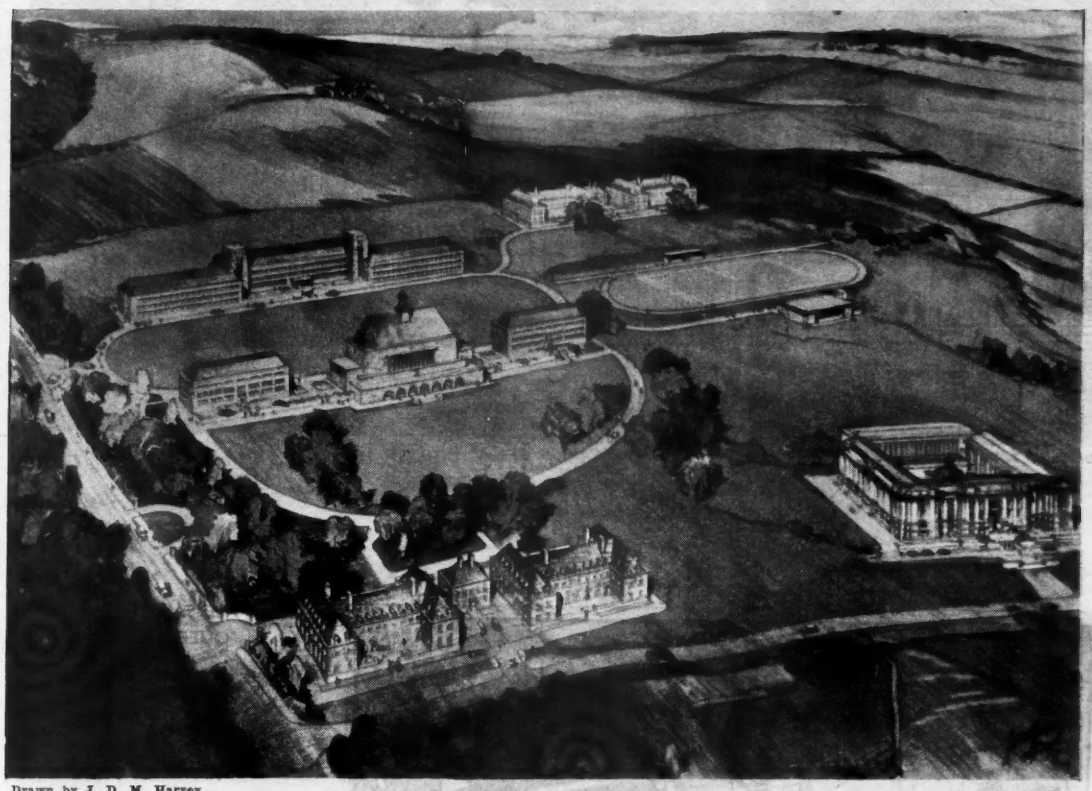
Overseas.

P. H. Connell (Cape Town).
Miss M. D. Edwards, B.Arch. (Univ. Coll., Auckland, N.Z.) (Auckland).

As Licentiates.

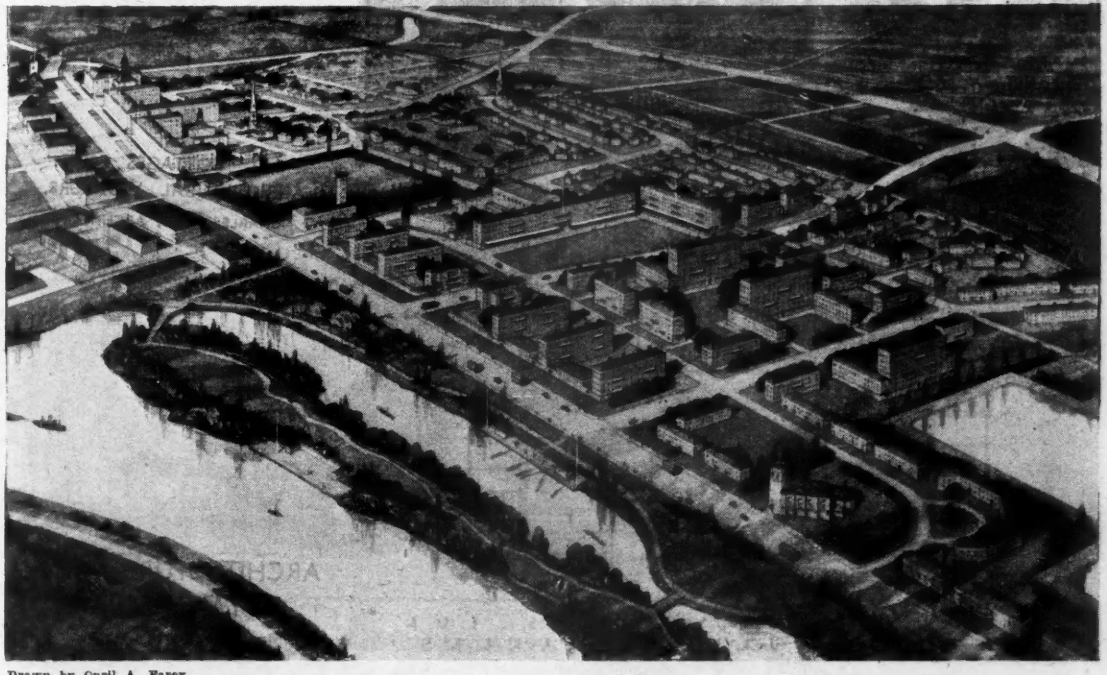
R. T. Akers (London).
A. E. Bishop (London).
P. R. Burrows (Wirral).
T. W. Clague, P.A.S.I. (Baldrine, Isle of Man).
G. J. Davies, P.A.S.I. (Llandyssul, Cardiganshire).
J. A. T. Dickson (Dunfermline, Fifeshire).
A. Dunlop (Kilmarnock).
S. E. Edmonds (Stafford).
R. A. C. Ellis (London).
F. W. Fennell (Gateshead).
H. P. Francis (Worcester Park, Surrey).
G. M. Hannaford (London).
M. Harvey (Sittingbourne, Kent).
S. C. Hurst P.A.S.I. (Brighton).
E. L. Ives (Northampton).
N. Jordan (London).
F. S. Kett (Axminster).
J. J. Lee (London).
R. P. McCrossan (London).
H. Marsh (King's Lynn).
Major K. P. Roberts, R.E. (West Wickham, Kent).
K. H. Thorn (Bath).
F. A. Weltert (London).
W. G. Wood (Leicester).

ARCHITECTURE AT THE ROYAL ACADEMY EXHIBITION



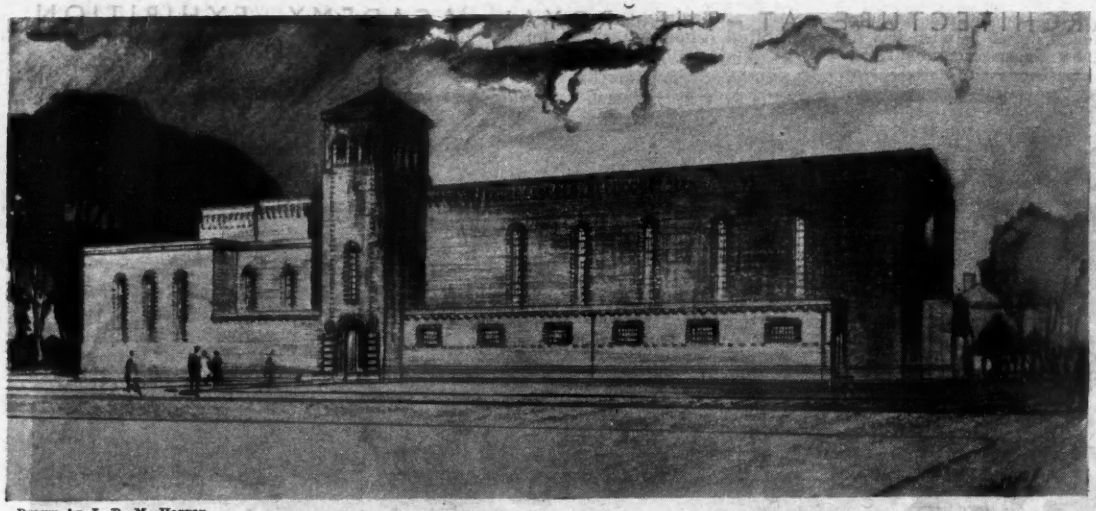
Drawn by J. D. M. Harvey.

THE NEW UNIVERSITY, ABERYSTWYTH.
PERCY THOMAS, P.R.I.B.A ARCHITECT

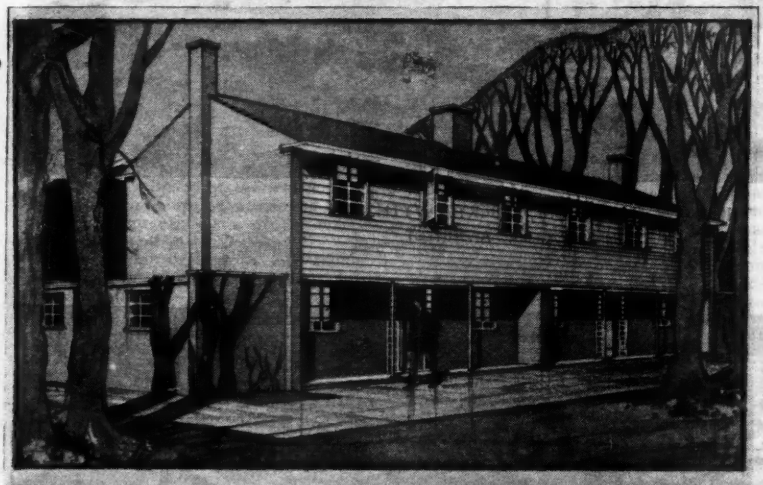


Drawn by Cyril A. Farey.

BRENTFORD REDEVELOPMENT.
HOWARD V. LOBB, F.R.I.B.A., ARCHITECT.

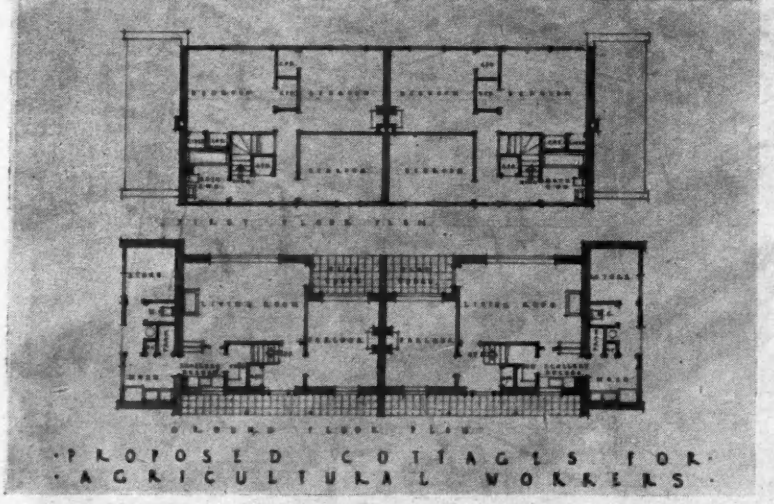


Drawn by J. D. M. Harvey.



Above : ALL SAINTS' CHURCH, QUEENSBURY.

MILNER AND CRAZE, FF.R.I.B.A., ARCHITECTS.

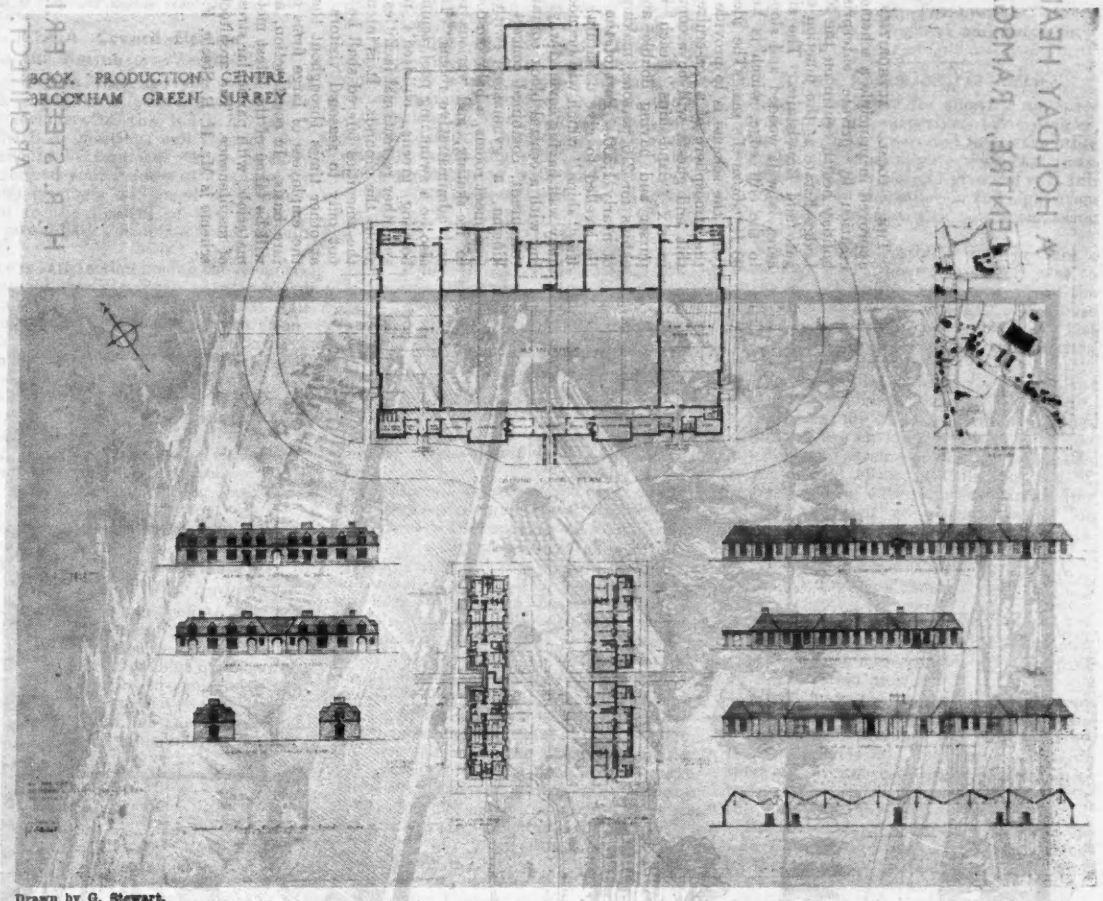


Left : COTTAGES FOR AGRICULTURAL WORKERS.

CHARLES READ, ARCHITECT.

ARCHITECTURE AT THE ROYAL ACADEMY EXHIBITION

ARCHITECTURE AT THE ROYAL ACADEMY EXHIBITION



Drawn by G. Stewart.

A BOOK PRODUCTION CENTRE, BROCKHAM GREEN, SURREY.

THE LATE SIR EDWIN LUTYENS, P.R.A., ARCHITECT.

Drawn by R. Peacock.

HOUSE AT NEWBURY.

LOUIS DE SOISSONS, A.R.A., F.R.I.B.A., ARCHITECT.

A HOLIDAY HEALTH CENTRE, RAMSGATE

THE LOCAL AUTHORITIES HAVE approved in principle a scheme for the creation by private enterprise of a holiday health centre on the East Cliff Lodge Estate at the junction of Ramsgate and Broadstairs. The site of 24 acres is well wooded and slopes down to the cliff edge, which is here some 90 ft. above the sea. The idea underlying the scheme is to provide on land the atmosphere of a sea-cruise, and to this end guests will be accommodated in six "land-ships," each under a purser and having double and single cabins for 216 persons, making a total of nearly 1,300. Part of the site will be levelled to give a natural base for the "ships" which will be moored to a quay wall having covered ways connecting with a central block containing the restaurant, combined concert hall and kinema, a gymnasium with electric treatment rooms, a ballroom convertible to ice-skating, and various recreation and administrative rooms. There will also be a swimming pool, tennis courts, bowling greens, children's play-field, and other recreational facilities disposed about the grounds. It is intended that the amenities offered shall be available not only to seasonal visitors but also at other times throughout the year to the employees of large firms on a welfare basis. In construction, advantage will be taken of the latest methods and materials, with particular stress on ease of maintenance. The architect for the scheme is Mr. H. R. Steele, F.R.I.B.A.

H. R. STEELE, F.R.I.B.A., ARCHITECT.

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

R.I.B.A. Council Election.

To the Editor of *The Builder*.

Sir,—Over a year ago you were good enough to publish a letter signed by some eighty members of the R.I.B.A. asking that R.I.B.A. meetings and Council elections should be resumed. More recently you informed your readers of a request by over 160 members addressed as a memorandum to the Council of the R.I.B.A. that a postal ballot on this question should be held.

There is satisfaction among the members that general meetings have been resumed and that elections are now to be held. In addition to those nominated by the Council, nominations to stand for election have been made from among the supporters of the memorandum as follows :

Fellows.—T. P. Bennett, W. Fraser Granger, J. Alan Slater, M. Hartland Thomas, F. R. S. Yorke.

Associates.—Arthur Ling, Colin Penn.

Licentiates.—Bernard H. Cox.

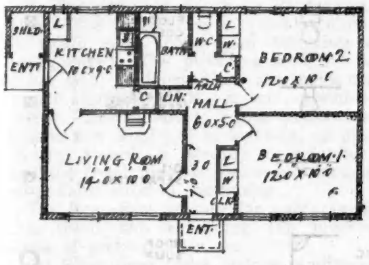
H. L. Barton.

142a, Albert Palace Mansions,
Battersea Park, London, S.W.11.

The M. o. W. Steel House.

To the Editor of *The Builder*.

Sir,—Surely it is not open to question that a house of this description should be entered from the centre and not from the side. This, of course, enables direct access to the bedrooms and bathroom, and leaves the living-room and kitchen free. No more space need be taken for the corridors if the house is properly planned. I enclose



a rough sketch plan which I think proves my point.

If this type of house must be provided for many hundreds of thousands of people to live in for the next ten years, surely it should be made as workable for the housewife and as comfortable for everyone to live in as possible.

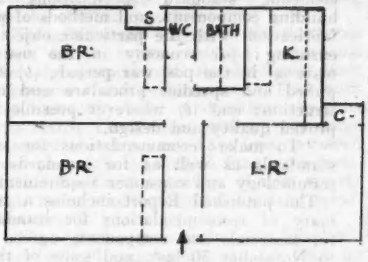
W. H. Slater-Eiggert.

London, N.W.3.

To the Editor of *The Builder*.

Sir,—As a quantity surveyor not expert but naturally interested in building generally, and particularly in house design, may I presume to offer criticism of the M.o.W. emergency factory-made house? In my view, where temporary structures are concerned, appearances should be subsidiary to usefulness. A house is built to be lived in, and the one under discussion being needed, we are told, in large numbers, especially so. We should not expect architectural elevations, but we require an interior which can be used with as little inconvenience as circumstances allow. In your issue of May 12 you touched on the general planning arrangements, which are the primary consideration in house design, and pointed out the three major troubles, access *vid* the kitchen to the living-room and bedrooms, and the position of the bathroom in relation to the bedrooms. I feel also that the view of the kitchen afforded by the glazed screen will not prove popular. The distance of the bathroom from the bedrooms is one thing, but its proximity—and particularly that of the w.c.—to the entrance is another and, I consider, a serious error. The lack of a second entrance can also be questioned.

I enclose a line diagram indicating, without detail, a manner in which similar accommodation might be arranged within the same enclosing walls and with direct access from the entrance to all rooms.



The kitchen, bathroom and w.c. are, in addition, unobtrusive instead of being the only three rooms opening off the entrance space. The special units forming fitments are indicated only by dotted lines. The additional area required by the passage has been obtained at the expense of the kitchen. This does not appear to be a serious alteration if the kitchen is not intended to be used for meals. The lobby outside the kitchen could be satisfactorily lit and ventilated through the roof.

No attempt has been made to give more accommodation than the M.o.W. design, but why not make the house rectangular and use the additional floor area to make the shed large enough to take a pram and/or bicycle, and for a kitchen entrance and fuel storage space under the roof?

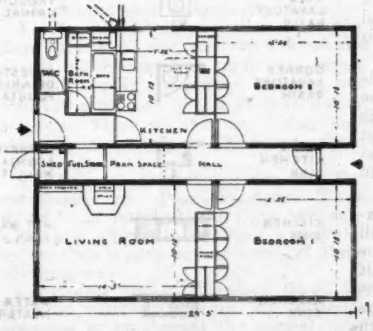
Wilfrid R. Crosher.

London, W.C.1.

To the Editor of *The Builder*.

Sir,—I studied with interest the alternative plans for the Ministry of Works emergency house. In preparing alternative plans good features of the original plan should be incorporated, and in the Ministry of Works plan there are excellent features. The drainage is economical and the rooms are well shaped.

In studying the alternatives I find that many of these satisfactory features are lost. I take the liberty of enclosing my suggestions; all the rooms are of the same dimensions as the Ministry of Works'



plan, the fittings, plumbing unit and drainage arrangements remain the same. The improvements I suggest are separate accesses to the living room and bedrooms from the hall, the provisions of a pram space, and a fuel store. The frontage of the building is only 24 ft. 7 in. The Ministry's plan has an area of 616 sup. ft.; this alternative increases this figure by only 65 sup. ft.

R. Thirlway,
Borough Engineer and Surveyor.

Surbiton.

To the Editor of *The Builder*.

Sir,—Thank you for allowing me space for my plan and suggestions [*The Builder*, May 19]. I am interested to see the other suggestions, especially to note how insistent the authors were to give the w.c. full prominence in the halls—in full sight from the front doors and with no disconnecting lobby!

Knowing how costly it is to produce a "standardised" house, my effort was to make as few variations as possible in the hope that the authors of the M.o.W. house might be induced to adopt them, as I feel they would give occupants much extra comfort—we shall see!

The other plans speak for themselves and were evidently thought out on different lines; my (friendly) criticism is that "faults" are obvious, but why the "improvements," such as two doors to a bathroom, wasted space in halls, position of w.c.s, and the extra drainage and water supply required, no accommodation for bikes, tools, fuel, and, again, no back door?

W. Henry White, F.R.I.B.A.

Bourne End-on-Thames.

To the Editor of *The Builder*.

Sir,—In the planning for post-war housing, could not more consideration be paid to the situation of w.c.s?

What may be described as pungent odours are inseparably associated with the w.c., and that this fact was recognised by many architects and builders is shown in their endeavours to isolate w.c. from bathroom in the period immediately preceding the war.

In some plans published recently in *The Builder*, the w.c. is again relegated to the bathroom, whilst in at least two cases a w.c. is shown adjacent to the front entrance door: (1) Scottish Housing Report, Long Term, Stage 2, page 279, April 7; (2) the M.o.W. Emergency House now on view at Millbank. Referring to your editorial of May 12 on the latter house I am quite certain the housewife would feel even more objection to taking her visitor through an area permeated by a noxious odour than through the kitchen, which you very properly mention as a fault.

E. I. Watkins (Cpl.).

Dimensions of Catalogues.

To the Editor of *The Builder*.

Sir,—The British Standards Institution is making an investigation regarding the dimensions and format of catalogues and manufacturers' literature generally. Information regarding pre-war practice is difficult to obtain at present, and the co-operation of architects and others who have a collection of pre-war sales and technical literature is invited. We should welcome information under the following headings in relation to such brochures and leaflets as they may have :—

Length (from top to bottom); width (from side to side); thickness and/or number of pages and folds; colours used (a) on cover, (b) on type matter; type of cover, *i.e.*, whether card, cover paper, art paper, etc.; and title of brochure, or brief description. I trust that some of your readers may be able to assist the Institution in this matter.

P. Good, Director,
British Standards Institution.

28, Victoria-street, S.W.1.

Total Loss or Cost of Works.

To the Editor of *The Builder*.

Sir,—The following case of four precisely similar bay-windowed houses of a like rateable value belonging to one owner may be of interest to owners of property.

Accommodation of each house—three bedrooms, bathroom, separate w.c., two reception rooms, kitchen, scullery, outside w.c., gardens front and rear.

One house entirely demolished has been classified by the War Damage Commission as a total loss, entitling the owner to the selling value as at 1939—a totally inadequate sum for reinstatement. This house had a tradesmen's entrance and space for garage.

The three remaining houses are classified for cost of works payment, entitling the owner to reinstatement as formerly. In point of fact, they have been reinstated and let, therefore further payment will not be required unless latent defects become apparent.

The houses were built prior to 1914, but compare favourably with houses erected since that date or, to adopt the ruling of the War Damage Commission, "the structure was practically as sound as at date of building, and design, layout and amenities reasonably equal to those of similar houses built since 1914."

The demolished house failed to stand up to a land mine in close proximity to its flank. In any case, the demolished house was precisely similar to the three remaining, so why differentiate?

Sydney A. Naylor.

London, W.1.

School Tuition in Glazing.

To the Editor of *The Builder*.

Sir,—Like many other building-trade crafts, glazing has so far been taught to apprentices solely by their employers, either in workshops or on sites where glazing is carried out. You may be interested to learn that arrangements have now been made by this J.I.C. to supplement this training by means of part-time attendance at a technical school, and a class which we believe to be the first of its kind in this country was opened at the Northern Polytechnic a short time ago. A second class will be opened as quickly as possible.

Glazing apprentices will receive tuition on one afternoon or one morning each week, but later this may be increased to one whole day a week. A detailed syllabus of training has been drawn up, and the instruction will be imparted by a practical glazier who has had long experience in every branch of glazing. Tuition will cover a period of three years. Additional classes will be started as experience is gained and development demands.

To begin with, classes will be available only for apprentices residing in the London area, but local Joint Councils in other parts of the country have been kept informed of progress, and it is hoped that similar classes will be formed by them in their localities in due course.

It is being borne in mind that the experience of technical education which will be acquired in this way may facilitate the provision of refresher courses for adult glaziers returning from the Forces to the glazing trade, which, as part of the general building trade, will be faced with a heavy programme of work when peace returns and will need a larger number of trained men than ever before.

Norman Hurtley, A. E. Soones,
Joint Secretaries, Joint Industrial
Council for the Glazing Trade.

STANDARDS IN BUILDING

M.O.W. COMMITTEE'S REPORT.

The first progress Report of the Standards Committee of the Ministry of Works has now been published under the title of "The Use of Standards in Building" (Stationery Office, 6d.). It is referred to in an Editorial on page 415.

The Committee, which has met under the chairmanship of Mr. Sydney Tatchell, was appointed with the following terms of reference: "To study the application in building of standard plan elements, standard specifications and building components, and methods of prefabrication, with the particular object of ensuring: (*a*) economy in the use of material in the post-war period; (*b*) simplified and speedier procedure and construction; and (*c*) wherever possible improved quality and design.

"To make recommendations for such standards as well as for standards for terminology and consumer requirements."

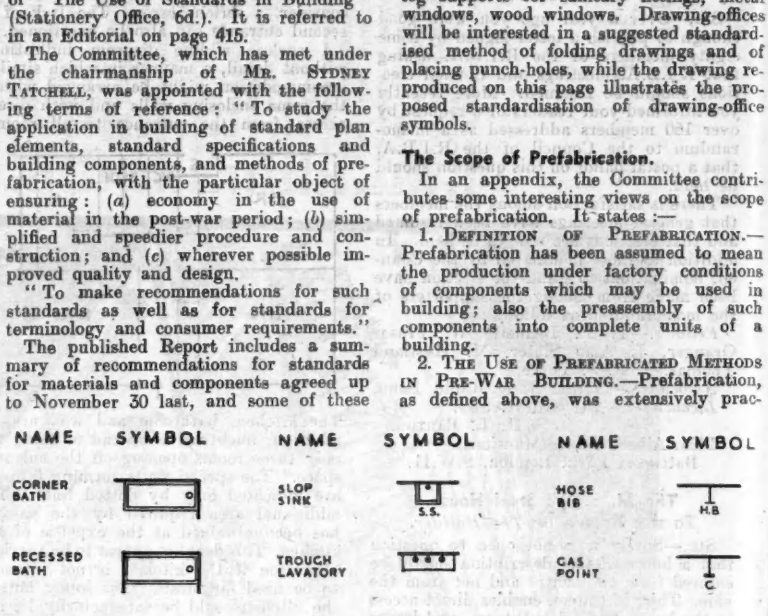
The published Report includes a summary of recommendations for standards for materials and components agreed up to November 30 last, and some of these are shown by a number of plates, among them lintels, roofing tiles, baths, w.c. suites, lavatory basin and kitchen sink, combined two-piece wash-tub and sink, leg supports for sanitary fittings, metal windows, wood windows. Drawing-offices will be interested in a suggested standardised method of folding drawings and of placing punch-holes, while the drawing reproduced on this page illustrates the proposed standardisation of drawing-office symbols.

The Scope of Prefabrication.

In an appendix, the Committee contributes some interesting views on the scope of prefabrication. It states:—

1. Definition of Prefabrication.—Prefabrication has been assumed to mean the production under factory conditions of components which may be used in building; also the preassembly of such components into complete units of a building.

2. The Use of Prefabricated Methods in Pre-War Building.—Prefabrication, as defined above, was extensively prac-



ARCHITECTURAL GRAPHICAL SYMBOLS

tised in pre-war building. Many components, such as fireclay goods and rainwater goods, can, of course, only be produced at a factory, but many operations formerly carried out *in situ* or at the contractors' shops have tended more and more to be carried out in factories—*e.g.*, the development of woodworking machinery has for many years led to the practice of factory prefabrication in place of prefabrication at the joiners' shop or fabrication at the site. Factory production reduces the use of manual labour, facilitates repetition of any particular component, and ensures the fullest use of the machine itself. Traps to basins and sinks and flush pipes to w.c.s are now classed as building supplies. Paint is bought ready mixed instead of being mixed on the site. Glass is normally delivered cut to sizes. Plasterboard, wallboard and other sheetings have to a growing extent displaced site operations such as plastering, while precast concrete is being more widely employed for structural units. The trend in the direction of transfer of processes to factories is likely to be accelerated by the development during the war of new techniques such as diecasting, steel pressing, clip fixing, welding and spray painting; also by the development of new materials, such as some of the alloys and organic plastics, and by new uses for existing materials such as the use of plywood and moulded asbestos cement for structural purposes.

The possibilities of factory assembly have also been more fully realised as the result of war experience. Development in this direction has in the past been hampered, so far as building work is concerned, by the absence of universally recognised standards and dimensions of components and by lack of precision in building.

3. Extension of Scope of Prefabrication.—The possibilities of prefabrication, it would seem, have been following a rising curve. The primitive mud hut is 0 per cent. prefabrication; the motor-car trailer approaches 100 per cent. prefabrication. The extent to which prefabrication is now employed in building, as previously shown, is already considerable, and the trend towards higher percentages of prefabrication is continuing.

The immediate reasons for encouraging this trend and extending the present scope of prefabrication are :—

(*a*) Work done under factory conditions will generally have advantages over work done under open-air conditions in that it allows a more exact control of quality, easier testing and checking of performance, and greater precision of workmanship. This precision of workmanship is of first importance if prefabricated components, possibly of more than one material or manufactured in more than one factory, are to be capable of quick assembly or fixing at the site.

(*b*) Factory prefabrication not only reduces the amount of manual labour required to produce a given article but extends the field from which labour can be drawn. It enables such labour to be used concurrently on a number of processes independent of weather conditions. It would also help to save much of the time which in traditional building is so often lost by one trade waiting upon another. All this should result in a more precise observance of time and progress schedules.

(*c*) Factory prefabrication can be developed on mass production lines. A properly planned production would confer on building benefits of speed, precision and maximum economy in the cost of production.

(*d*) Factory production, particularly of large units, would make for the development of dry building processes and so eliminate the delay that must occur when wet processes are used.

(*e*) Factory-produced units lend themselves to the development of methods of site erection which would reduce to a minimum delays due to weather conditions.

(*f*) The maximum use of factory-produced units would enable the supply of building labour, which must always to some extent be used for site operations, to be spread out over the largest possible number of buildings, and thus lead to the completion of any programme of building in the shortest possible time.

To achieve this extension the first step must be to review existing components for the purposes of standardising their dimensions and performances. This work has already been undertaken by the Standards Committee, and a very large number of components have been reviewed and passed to the British Standards Institution for the preparation of new specifications or modification of existing specifications.

The second step is to indicate how such standardised components can be built up into complete assemblies.

As a third step, once dimensions and performances have been established for complete units it may be possible to produce alternative designs which would more fully employ prefabricated methods.

This procedure is capable of extension to many portions of a building such as fireplaces and flues, complete assemblies of kitchen equipment, plumbing and other installations. It can also be applied to such structural units as floors and roofs. Comprehensive lists of possible assemblies are being considered by the Standards Committee.

The fourth step should be to lay down design requirements for complete building units. Criteria for complete structures of all types of construction have been laid down by the Interdepartmental Committee on House Construction. These include :—

(*a*) Strength and stability; (*b*) freedom from dampness; (*c*) thermal insulation; (*d*) sound insulation; (*e*) fire hazard; (*f*) maintenance and durability; (*g*) freedom from vermin infestation.

Certain other desirable criteria should also be laid down for prefabricated construction :—

(*h*) Suitability for standardisation and mass production; (*i*) adaptability of unit to alternative designs; (*j*) maximum prefabrication in the factory; (*k*) lightweight, easily transportable components; (*l*) ease and simplicity of erection at the site; (*m*) low initial cost and maintenance; and (*n*) good architectural design.

Finally, the whole operation of transfer from factory to site and erection on site should be reviewed in order to ensure adequate supply and prompt delivery, and also the avoidance of loss of time during erection. These matters are rather outside the scope of the Standards Committee.

4. Essential Conditions for the Development of Prefabrication.—There would be no justification for any new substitutes or alternative method or material unless they secure one or more of these advantages :—

(*a*) Reduce cost; (*b*) reduce time; (*c*) draw on additional labour and material resources to supplement the normal; and (*d*) improve standards without adding to the cost.

There must be an acceptance of the principle of maximum standardisation of components, dimensions and methods of assembly. It would be necessary to obtain an assurance that prefabricated structural units complying with standard requirements would be accepted throughout the country and not be dependent on diversity of interpretation of building regulations.

Designs of prefabricated buildings must not be unduly restricted by tradition. New forms of construction may have an æsthetic appeal entirely different from that developed by the older forms of construction. Indeed, in many other countries the new forms have met with widespread acceptance and are even regarded as indicating a fresh and vigorous outlook on life.

The possibility of short-term construction having to be resorted to in order to meet exceptionally urgent needs cannot be overlooked. In its simplest form it might consist of converting hutments and sleeping quarters attached to hostels and camps into residences.

5. Conclusion.—Many industries are known already to be preparing designs and considering questions of reorganisation for post-war prefabrication, as defined above. They will be able to proceed more confidently when they know what standard requirements are likely to be and what standard components will be available. To attain this end, the programme of the Standards Committee is proceeding on the following lines :—

(*a*) Recommendation of standards for components; (*b*) recommendation of methods of assembly of components in the factory and on the site; (*c*) considerations of designs of complete units more fully, employing prefabricated methods.

GAS INSTALLATIONS

M.O.W. POST-WAR BUILDING STUDY.

Post-War Building Study, No. 6, by a committee convened by the Institution of Gas Engineers (H.M. Stationery Office, price 6d. net), reviews (1) existing information and practice concerning installations in buildings for (a) the supply of gas for all purposes from the point of entry of the gas to the property boundary to its delivery to an appliance; and (b) gas-operated household appliances serving the single-family dwelling; (2) proposals for improved gas-operated appliances for space heating, cooking, refrigeration, hot-water supply, and clothes washing and drying; and (3) makes recommendations for practice in post-war buildings.

The Report is in two parts : (I) Gas Service Pipes, and (II) Internal Installations, the latter part containing sub-sections on installation pipes, gas meters, gas appliances, and gas installation in a typical school and for domestic science centres. Illustrations included are sketches of suggested housing for gas and electricity meters, and an elevation showing the space required for gas cookers in kitchens of small family dwellings. There are appendices on (A), a selected list of gas and coke-burning appliances for single-family dwellings, and (B) "Bottled" gas (butane, propane, etc.) installations. The Report has a glossary and an index. It is a concise and practical document which should be of considerable value to all concerned with gas installations.

It is proposed that a booklet shall be prepared by the gas industry in amplification of, and giving explanatory notes on, the technical matters referred to, for the use of the technical personnel in the gas industry, and the recommendations will form the basis for Codes of Practice.

An Architect's Estate.

Dr. William Kelly, A.R.S.A., LL.D., of Aberdeen, left £22,458.

STEEL STRUCTURES

M.O.W. POST-WAR BUILDING STUDY.

THE Minister of Works has published the Report of the Post-War Building Study Committee on Steel Structures.* This Report is one of twenty-two Post-War Building Studies which will be published during the year, and which are the work of Committees appointed by Lord Reith when Minister of Works. The Reports are described as not being "official publications in the sense that the Government as such is responsible for, or necessarily accepts, the views expressed, but their contents are authoritative, and cannot but be of great value to all concerned with preparations for building after the war."

The authoritative nature of the Steel Structures Report is guaranteed by the chairmanship of Dr. David Anderson; the terms of reference were: "To review the practice of steel-frame construction of buildings, and to make recommendations which will ensure in the post-war period the greatest practicable economies of material and the most rapid methods of construction, due regard being paid to interrelated requirements of modern buildings, such as lighting, ventilation and plumbing." The Committee has dealt with the subject by taking into review existing codes and specifications in this well-documented field, and making a selection of the relevant parts to form a co-ordinated recommendation. Consequently, the Report contains nothing with which experienced engineers are not already acquainted in detail.

For example, the loads on public floors, dance halls, etc., are taken from British Standard Specification No. 449 of 1937, with the addendum that partitions should in future be treated as superimposed load. With regard to wind loads, the Report on Steelwork for Buildings, Part I., "Loads and Stresses," published by the Institution of Structural Engineers, is recommended, with the exception that the L.C.C. bye-laws are preferred for wind loads on sloping roofs.

Dealing with suggestions for the application of methods of design based on true stresses in beams and columns instead of the approximate methods now in general use, the Committee is of opinion that insufficient experience has been obtained to justify deviation from the recommendations of the Report of the Joint Committee of Civil and Structural Engineers. The Committee recommends that in order to obtain further and continuing experience of such methods of design, the Government should design its own buildings upon the methods developed in that Report, and publish the calculations so that in course of time improved empirical methods of design may be involved.

Stresses in steel members are dealt with by adhering to B.S. Specification No. 449 of 1937, with the retention for industrial buildings and single-storey buildings only of the increased stresses permitted by the War Emergency Revision of that specification. With regard to high-tensile steel, B.S. Specification 548 of 1934, is recommended, with a corresponding increase of permissible stress for industrial and single-storey buildings. A note to this section recommends that for reinforced concrete stresses shall never exceed 25,000 lb. per sq. in., or half the guaranteed yield point, whichever is less. If B.S. Specification No. 15 of 1936 for Mild Steel is revised so as to require a minimum yield point for mild steel, stresses might be reconsidered.

Casing of steel members is dealt with by reference to Clause 13 of B.S. Specification No. 449, 1937, which permits an increase in stresses for steel with solid encasement of adequate thickness. The increased war-time stress permitted in the revision of 1940 is endorsed for industrial buildings and single-storey buildings. A "hardy annual" turns up in the recommendation for the use of broad-flanged beams which are undoubtedly useful, but there is always the question as to whether the demand would justify the laying down of plant for their production.

Extended use of welding is encouraged along lines which are now familiar, particular emphasis being laid upon the use of welding in the fabricating shops.

Some Irrational Customs.

The most interesting chapter of the Report is devoted to the suggested elimination of long-standing and somewhat irrational customs in steel construction. Amongst these customs which might well be reconsidered in the light of their functional purposes are the specification of "square necks" for foundation bolts; the unnecessary wide variation in widths and thicknesses for slab bases; the construction of built-up bases bedded on concrete and solidly grouted or filled underneath with fine concrete; the riveting of a stanchion end or joint that has been machined for a dead bearing; the staggering of joints in plate girder flange angles; "smithed" work such as joggled flanges of joists and other beams; there are also suggestions that welding should be used instead of bent plates, as a ready means of constructing stair stringers, mansard frames, etc.; that expressions such as "cut dead" and "cut exact," which apply to the length of members, should be accompanied by a statement of the limits of tolerance required; and that a "notched" end should imply sufficiently only to clear. These practical suggestions should eliminate uncertainties and effect welcome economies.

The final paragraph of the Report referring to the handling of contracts for steel building framework suggests the supply of full information with the placing of the contract; the avoidance of revisions after commencement of fabrication; the early checking and return with comments of detail drawings; the provision of adequate survey before the building is designed, and the provision of a time schedule covering the client, the professional advisers and the contractor.

It will thus be seen that the Report does not break new ground, but it is very provocative in its clear indication of the necessity for further research in many directions, such as, for example, the complete examination of the effects of wind on steel buildings, the value of fire encasement as a load-bearing factor in the total construction; the possibility of determining the working stress in relation to yield point instead of ultimate stress; further development of various types of welded joints, and the fullest use of cold steel strip rolled into light structural shapes, which investigation would, of course, carry with it an examination of corrosion and fire risks.

The question of scientific and industrial research is so much in the air that considerable attention will undoubtedly be given to the need for research into these as well as other factors affecting the economic use of steel. It may be that the recently formed British Iron and Steel Research Association will apply itself vigorously to these problems which must be of vast importance to the steel makers. A logical programme of research for the Association will be based, of course, on the problems at the "marketing end," and work back from there to the problems of steel manufacture. Undoubtedly the question will also arise as to whether this research work should be wholly in the hands of the industry, or whether it should be so carried out that the public has access to it. This question itself will need to be dealt with at some stage, because so much valuable research work has in the past remained buried in pigeon-holes without the opportunity ever arising of its practical application.

* H.M. Stationery Office Price 6d. net.

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CIVIL ENGINEERING CONTRACTORS

"WET TIME" AGREEMENT.

THE annual Report of the Council of the Federation of Civil Engineering Contractors for 1943-44 contains particular reference to the agreement recently concluded with the trade unions who are parties to the Industry's Conciliation Board, which provides for the payment of half the time lost due to inclement weather, with a minimum guarantee payment of 32 hours each week at ordinary rates. The opinion was expressed that these new provisions, which will come into operation on a date to be agreed by the Conciliation Board, will go far to meet the desire expressed by Government speakers for security and stability in the post-war period. Other matters which were the subject of report included a new scheme for the practical training of young engineers, jointly agreed and to be administered in collaboration with the Institution of Civil Engineers, and the representations made to the Government by the Institution of Civil Engineers and the Federation on the question of preparatory work which should be put in hand to enable work on civil engineering projects to be undertaken immediately after the cessation of hostilities, with a view to the absorption of large numbers of demobilised men. Reference was also made to the increasing mechanisation of the industry, and to the valuable contribution the industry is making to the nation's fuel requirements in winning coal by opencast production.

At the annual meeting of the Federation, held in London on May 16, Mr. Henry T. Holloway was re-elected President for the ensuing year. This constitutes Mr. Holloway's fifth year of office.

The President, on behalf of the members, presented Mr. J. Clayton, A.C.A., with a gold watch, suitably inscribed, in appreciation of his work in devising a modification of the "Pay as you Earn" Income Tax scheme.

At the first meeting of the new Council, held immediately after the meeting, Mr. A. M. Holbein, B.Sc., A.C.G.I., D.I.C., was elected chairman, and Colonel J. L. French, C.B.E., elected vice-chairman of the council.

SUNLIGHT : VENTILATION : NOISE : FIRE

DRAFT CODES OF PRACTICE.

FOUR chapters of an Interim Code of Functional Requirements for dwellings and schools have been issued by the B.S.I. on behalf of the Codes of Practice Committee as drafts for comment. These chapters—viz., I (B) Sunlight, I (C) Ventilation, III Precaution against Noise, IV Precaution against Fire—are also available on sale to the general public.* This preliminary process of issuing draft codes for comment and the subsequent consideration by the Committee of the comment submitted will ensure that the codes as finally published shall be of the maximum value to architects, engineers and builders. Hence it is emphasised by the Codes of Practice Committee that the comments received upon these chapters of the Interim Code of Functional Requirements will be carefully considered before final prints are published by the B.S.I. on behalf of the Committee. The period for comment expires on June 30.

The practice of issuing specifications and codes for comment has long been adopted by the British Standards Institution in this country and by the American Society for the Testing of Materials in the U.S.A., and has proved very helpful.

The documents now issued cover much new ground and embody material which has never before been made generally available to the building public. Consequently the views of those who are likely to use the Codes or to be affected by them in one way or another should be most welcome and valuable.

Two further chapters of the Interim Code of Functional Requirements for Dwellings and Schools—*i.e.*, I (A) Daylight, VII (A) Provision of Artificial Light—will be circulated for comment in June, as will Chapter VIII, Heating and Heat Insulation of the complete Code of Functional Requirements. The remaining chapters—viz., II, Space and Circulation; V, Loading; VI, Weather Protection; VII, Decoration; and X, Dirt and Vermin—should be issued before the end of the year.

To the building industry in all its various branches the value of these Codes clearly depends upon their direct applicability to everyday problems; and in developing them the Codes of Practice Committee stresses the value of the comments and the constructive criticisms which may emerge as a result of wide circulation of the drafts.

It is impossible in a short space and without intimate practical knowledge of the matters dealt with in the Codes to anticipate the lines upon which comments may be made, but they may well take one or two forms. Either they could be directed to points which are not regarded as sufficiently clear, and perhaps not in complete accordance with practical experience, or they may be directed to questions where further research or investigation is necessary to make the Codes of full value to architects, engineers or builders.

Defects brought out by criticisms of the first kind will be of great value and can be readily dealt with by the Committee, but criticisms of the second kind will call for investigations and may well be met by revisions of the Codes when full information is available; they will nevertheless be welcome.

To cite a very few points which may appear to merit comment, Chapter I (B), Sunlight, deals clearly with the siting of buildings and the orientation of windows to secure adequate sunlight, and then goes on to mention two methods of analysing the incidence of sunlight—viz., the "Burnett" diagrams and the "Heliodon" method—both of which have been dealt with fully in R.I.B.A. publications. It may be that the recommendations given in the Code will suffice, and that only in exceptional cases will these refined methods of analysis be needed; but, on the other hand, it may be that a study of these methods by experts would result in a method of reasonably refined analysis of sunlight incidence which would prove of value in ordinary daily building work.

Standards of Ventilation.

Chapter I (C), Ventilation, recommends standards for the area, position and kind of windows, and the air changes in the rooms, and in Part III describes methods by which the standards of air change may be realised. The value of windows and other openings for ventilation which has a far-reaching effect upon public health depends upon the way in which they are used quite as much as upon the way in which they are provided, and although it is probably not a matter for a technical Code of Practice, yet there seems to be a need for investigation of the way in which ventilation is used and misused. Such investigation might result in a few health rules which could be widely propagated and result in a better understanding of the science of healthy ventilation.

Chapter III, Precaution against Noise, gives recommendations for methods of diminishing the noise nuisance in average circumstances, but frankly admits that it is impossible to prescribe invariable rules for the sound insulation which should be provided in buildings. Moreover, people are allergic to sound in very varying degrees, and the particular kind of sound which might disturb one person may be welcome to another. The recommendations of the Codes of Practice Committee will be helpful both in regard to new and existing buildings and will provide good average results, but whether they will produce the full results desired by individuals who "suffer" from noises is another question, and it is these latter who are most vocal on the subject. There is an interesting point which emerges in Part I of the Code—*i.e.*, a new yard-stick on sound, the "noise unit," is introduced in order to by-pass some of the more complicated procedure in analysis of sound transmission. This will serve to deal with most straightforward day-to-day problems, and its relationship to the well-established Decibel and Phon is described.

Chapter IV, Precaution against Fire, differs rather from the others. It deals with a well-documented subject which has long been reflected in building bye-laws, whereas Sunlight, Ventilation and Noise have scarcely been treated in a codified form before. The important new feature in Chapter IV is its codification of Fire Resistance on "Time-Temperature" lines and its recommended acceptance in practice of any materials or methods of fire resistance which give a performance of two hours, one hour, or a half an hour fire resistance as circumstances may demand. The suggestion is that the rigid insistence on 9-in. brickwork or 2 in. of concrete, or whatever appeared in old bye-laws may be replaced by the admission of any material giving the requisite degree of fire resistance. For this reason the Code should be very carefully scrutinised by those who seek to introduce new materials and methods (prefabrication, for example) into building. The adoption of the Code would readily admit new materials into building practice, but they may find that their inventions fall short of the recommended precautions against fire, and they will either need to revise their own work or say something definite about the Code.

Taken by and large, these first efforts at codification by the Government-supported Committee are worthy of encouragement and careful consideration. They represent a stout effort to provide a long-needed link between the laboratory and industry. They seek to promulgate in forms suitable to modern speed and pressure the results of long-term research and professional experience which might otherwise remain for many years in the "back room" before the building public received any advantage from them by the process of casual scientific papers and publication.

* British Standards Institution, 28, Victoria-street, London, S.W.1: "Sunlight" and "Ventilation," 6d. each, and "Noise" and "Fire," 2s. each, post free.

The M.O.W. Factory-made House.

For the assistance of those unable to see the M.O.W. steel house itself a complete set of drawings and photographs is now on exhibition at the Building Centre, Maddox-street, W.1.

B.S. Specification.

The following B.S. Specification has been issued from 28, Victoria-street, S.W.1: Mastic Asphalt (B.S. No. 1,162) (price 2s., post free).

Auckland University College.

The prospectus of the School of Architecture, Auckland University College, the University of New Zealand, which has just been received, is a remarkably well-produced book, which shows that an agreeably high standard of work is maintained by the students, notwithstanding the wartime difficulties: 66 students attended last year, against 40 the previous year. In his readable news-letter, Mr. C. R. Knight, M.A., B.Arch. (Liverpool), Professor of Architecture, states that New Zealand is probably at least £100 millions behind in building requirements.

TRAINING FOR BUILDING

A LEAD FROM KENT.

DR. E. ALEC WOOLF, Principal of Erith Technical College and a member of the Kent Education Committee, was the guest of honour of the London Master Builders' Association's South-Eastern Area at a luncheon in Sidcup last week. MR. R. BAKER-SMITH, Chairman of the Area, presided. Among those present were Sir WALDRON SMITHERS, M.P., and the Chairman, Clerk and Surveyor of the Chislehurst and Sidcup U.D.C.

DR. WOOLF's subject was "Training for Building," a matter of considerable interest locally, for the Kent County Council is already taking vigorous steps to extend vocational training, particularly in the building industry, and joint advisory committees of members of the Education Committee and representatives of the building industry are being set up in various areas throughout the country.

In the course of his address Dr. Woolf said: In its proposals for post-war education the Board of Education has referred to the need for a closer relationship between education and industry. There are suggestions of the possibilities of National Advisory Committees, but the solution of the problem of the provision of personnel for industry, and especially for the building industry, is a problem that will have to be solved regionally by co-operation between the education authorities, who are responsible for the training and education of the young people, and the industries themselves.

The school-leaving age is to be raised to 15 with a probability of 16. The boy, after the age of 11, is to be guided to one of three educational organisations—Modern, Grammar, Technical—at least, that is the interpretation of prominent educationists, although there is nothing in the Education Bill which stipulates this definition. All that the Education Bill implies is that the three Rs shall be replaced by the three As with a deviation according to age, adaptability and attainment.

In the choice of any future occupation for a young person, three factors have to be taken into consideration: the attainment of the boy, the possibilities of the occupation and the wishes of the parent, and I am not at all sure that the last is not the least powerful. There is going to be, in my opinion, a shortage of trained personnel; there is going to be a shortage even of unskilled or semi-skilled personnel, and with many choices of employment open to young people parents are going to be more concerned with possibilities than they have been in the past. I am finding that parents who discuss the future of their sons with me are more interested in what the boy is going to be in five years' time than what he is going to earn in the immediate present, and I do not think that the parent is to be other than commended for his or her attitude.

In this district, where there is a tradition of skill, parents are even more concerned with future possibilities than perhaps in other areas. There is still a feeling that a black-coated occupation is more respectable than any other, but we must remember that this feeling is based upon experience in the past when it was found that the black-coated workers suffered comparatively less from industrial crises than those in industrial occupations. So we have to consider, as far as the building industry is concerned, the needs of the industry, the possibility of providing for those needs and the assurance to parents that the industry is one to which their boys should be guided.

Entrants Needed.

The building industry needs at least 20,000 entrants into the skilled trades and vocations in a normal year. In the post-war period this number will obviously be much larger as there has been little recruitment in war time, and the building needs will be intensified by losses during the war period and by increased building needs, and the figure of 50,000 per annum has been quoted by a national federation. The Board of Education and local authorities have set up in technical colleges and junior technical schools building courses intended to provide some measure of instruction and training which may supply within a reasonable time, provided that all of these young people enter the building industry, some 10,000 entrants per annum.

There are two ways of preparation for industry. One is by learning the job on the job, and the other is by a cultural-cum-technical education which will provide not only the background of an education for living, but give an opportunity of learning the technique of a livelihood. A great teacher of building has said "The Building Course in a Day Technical School does not contemplate a preponderance of workshop training. The main object is not proficiency in trade practice, but rather a study of scientific principles underlying the practice of building construction."

I think it is acknowledged that there is a need for a comprehensive, considered scheme for building education, and the junior technical school and building courses may form a comprehensive part of this scheme. Given adequate attention to general school subjects, such as English, history, geography, current affairs, the curriculum will include mathematics, general science, drawing (including art, building drawing and technical sketching), building construction, workshop practice and physical training.

It cannot be intended to provide a trade training in the junior technical school. Materially and spiritually, the facilities are not adequate. Junior technical schools have not been provided with either workshops or equipment comparable with those to be used in the trade, and the young people are not of an age when they should be trained entirely in a trade technique.

A boy who intends to be an operative and nothing more had better go straight from a modern school to the job. It must be clear that if the practical subjects are used to give a great interest to the whole building matter and subjects are treated fundamentally and rationally, then the education received for this course will be suitable for whatever employment a boy may take up.

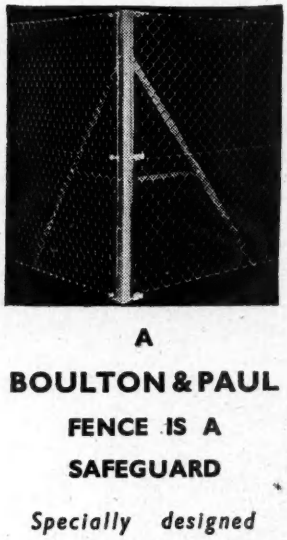
We, the Day Technical Schools, must be prepared to train for general ability rather than the specific technique. The changing world industry postulates a need for the training of skilled minds as well as skilful hands. The phrase that I have always used is "training for mental agility and manual dexterity." Part-time day courses and evening courses will provide for the training of young employees in two directions—one for the ambitious apprentice and the other for the craftsman. The courses for the former will include building construction, building science, building mathematics, etc., and for the latter a practical course on City and Guilds lines.

Industry Must Co-operate.

In the building courses in the Day Technical Schools there is a bias on the building industry, but the decision to enter the industry depends on the opportunities provided by the industry itself. If all that the industry can provide for the boy of 16 who has passed through a three-year technical building course is a job as a bricklayer's apprentice, or a plumber's apprentice, then you will find that the parent's point of view will be that if the boy is going to learn a specific job only there is no reason to keep him at school until he is 16 before entry. If, however, the building trade is going to offer the possibility of a general training or a general apprenticeship with an opportunity of learning the many sides of the building industry, including office work, then I do not fear that the recruitment needed will be difficult to find.

The difficulty of finding teaching personnel cannot be over-estimated. We shall have to recruit from the building trade for the teachers of the various courses, and it may be necessary to ask the industry from time to time to loan their skilled craftsmen who can demonstrate modern technique in the various aspects of crafts instruction. In order that the training should be as up to date as possible and on the right lines co-operation with the industry is essential, and here the setting up of Building Advisory Committees in each area where there is a technical college or day technical school is not only a wise but an essential step. In this way the relationship between training and industry can be maintained and the smoothness of flow of recruitment be guaranteed.

I hope that opportunities will be given—and taken—for employers and craftsmen to visit schools and colleges to talk to the students about various aspects of building.



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Prices of Bricks.

The Minister of Works has made two Orders prescribing new prices for all sizes and types of building bricks. They will operate as from May 22, 1944, and will replace the Orders made last October (S.R. and O., 1943, Nos. 1457 and 1478): S.R. and O., 1944, No. 563 (7d.); S.R. and O., 1944, No. 564 (2d.).

Industry and Education.

The F.B.I. Education Committee, under the chairmanship of Mr. Charles Tennyson, C.M.G., has been considering the educational system in relation to the needs of industry. Its conclusions, in report form, have been presented to and approved by the Federation's Grand Council. The report is now issued from 21, Tothill-street, S.W.1.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 8th APRIL, 1944

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	2/0	1/7	Cleveleys	2/0	1/7	Isle of Thanet	1/10	1/5½	Saxmundham	1/8½	1/4½
Aberdare	2/0	1/7	Clitheroe	2/0	1/7	Isle of Wight	1/9½	1/5	Scarborough	1/11½	1/6½
Abergavenny	2/0	1/7	Cobham (Surrey)	1/11	1/6½	Keighley	2/0	1/7	Scunthorpe	2/0	1/7
Abingdon	1/10½	1/5½	Colchester	1/11½	1/6½	Kenilworth	2/0	1/7	Selby	2/0	1/7
Accrington	2/0	1/7	Colwyn Bay	1/11	1/6½	Kettering M.B.	2/0	1/7	Sevenoaks	1/10½	1/5½
Aldeburgh	1/8½	1/4½	Congleton	1/11½	1/6½	Kidderminster M.B.	1/11½	1/6½	Sheerness	1/10	1/5½
Aldershot	1/10½	1/5½	Coventry C.B.	2/0	1/7	King's Lynn	1/10	1/5½	Sheffield	2/0	1/7
Alfreton U.D.	2/0	1/7	Cranbrook	1/10	1/5½	Kirkham	2/0	1/7	Shipley	2/0	1/7
Alnwick	1/11½	1/6½	Cranleigh	1/10	1/5½	Knowle	1/11	1/6½	Shoeburyness	1/11½	1/6½
Altrincham	2/0	1/7	Crawley	1/10	1/5½	Lancaster	2/0	1/7	Shoreham	1/11	1/6½
Amble	1/11½	1/6½	Crewe	1/11½	1/6½	Leamington M.B.	2/0	1/7	Shrewsbury M.B.	1/11½	1/6½
Amersham	1/10½	1/5½	Cromer	1/9	1/4½	Leatherhead	1/11	1/6½	Sittingbourne	1/10	1/5½
Ammanford	2/0	1/7	Crowborough	1/10	1/5½	Leeds	2/0	1/7	Skegness U.D.	1/11	1/6½
Andover	1/10	1/5½	Cuckfield	1/10	1/5½	Leicester C.B.	2/0	1/7	Sleaford U.D.	1/10½	1/5½
Ardingly	1/10	1/5½	Darlington	2/0	1/7	Leighton Buzzard	1/9	1/4½	Slough	1/11	1/6½
Arundel	1/10	1/5½	Darwen	2/0	1/7	Letchworth	1/11	1/6½	Smethwick	†2/0	††1/7
Ascot	1/10	1/5½	Daventry M.B.	1/10½	1/5½	Lewes	1/10	1/5½	Southampton	1/11½	1/6½
Ashby-de-la-Zouch U.D.	2/0	1/7	Deal	1/10	1/5½	Lichfield M.B.	1/11	1/6½	Southend-on-Sea	1/11½	1/6½
Ashford (Kent)	1/10	1/5½	Denbigh Town	1/11	1/6½	Lincoln C.B.	2/0	1/7	Southport	2/0	1/7
Ashford (Middlesex)	2/0	1/7	Derby C.B.	2/0	1/7	Littlehampton	1/10	1/5½	South Shields	2/0	1/7
Ashington	1/11½	1/6½	Devizes	1/9	1/4½	Liverpool	‡§2/1	¶	Spalding	1/10	1/5½
Ashtead	2/0	1/7	Dewsbury	2/0	1/7	Llandudno	1/11	1/6½	Stafford M.B.	1/11½	1/6½
Ashton-under-Lyne	2/0	1/7	Didcot	1/10	1/5½	Llanelly	2/0	1/7	Staines	1/11	1/6½
Aylesbury	1/10	1/5½	Diss	1/8½	1/4½	London—			Stamford M.B.	1/11	1/6½
Aylsham	1/9	1/4½	Doncaster	2/0	1/7	12m. radius	2/1½	1/8	Stevenage	1/11	1/6½
Bagshot	1/10	1/5½	Dorchester	1/9½	1/5	12-15m. radius	2/1	1/7½	Stockport	2/0	1/7
Banbury	1/10	1/5½	Dorking	1/10½	1/5½	Long Eaton U.D.	2/0	1/7	Stockton-on-Tees	2/0	1/7
Barnsley	2/0	1/7	Dover	1/10	1/5½	Longton	2/0	1/7	Stoke-on-Trent C.B.	2/0	1/7
Barnstaple	1/10	1/5½	Dovercourt	1/10	1/5½	Loughborough M.B.	2/0	1/7	Stourbridge M.B.	2/0	1/7
Barrow-in-Furness	2/0	1/7	Driffield	1/10½	1/5½	Louth M.B.	1/10½	1/5½	Stourport U.D.	1/11½	1/6½
Barry	2/0	1/7	Droitwich M.B.	1/11½	1/6½	Lowestoft	1/10	1/5½	Stowmarket	1/9	1/4½
Basingstoke	1/10	1/5½	Dudley M.B.	2/0	1/7	Luton	1/11½	1/6½	Stratford-on-Avon M.B.	1/11	1/6½
Bath	1/11½	1/6½	Dunstable	1/10½	1/5½	Macclesfield	1/11½	1/6½	Stroud	1/11	1/6½
Batley	2/0	1/7	Durham City	2/0	1/7	Maidenhead	1/11	1/6½	Sunderland	2/0	1/7
Beaconsfield	1/10½	1/5½	Eastbourne	1/11	1/6½	Maidstone	1/10½	1/5½	Sutton Coldfield M.B.	2/0	1/7
Beccles	1/8½	1/4½	E. Glam. (Mon. Val.)	2/0	1/7	Malvern U.D.	1/10½	1/5½	Swaffham	1/8½	1/4½
Bedford	1/11½	1/6½	East Grinstead	1/10	1/5½	Manchester	2/0	1/7	Swanage	1/10	1/5½
Berkhamsted	1/10	1/5½	Edenbridge	1/10	1/5½	Manningtree	1/9	1/4½	Swansea	2/0	1/7
Berwick	1/11½	1/6½	Ely	1/9	1/4½	Mansfield M.B.	2/0	1/7	Swindon	1/10½	1/5½
Beverley	2/0	1/7	Epping	2/0	1/7	March	1/9	1/4½	Tamworth M.B.	1/11½	1/6½
Bexhill	1/10½	1/5½	Exeter	1/11½	1/6½	Margate	1/10	1/5½	Taunton	1/10½	1/5½
Bideford	1/10	1/5½	Exmouth	1/10½	1/5½	Market Harborough	1/11	1/6½	Tenterden	1/10	1/5½
Biggleswade	1/10	1/5½	Falkenham	1/9	1/4½	Matlock U.D.	1/10½	1/5½	Thames Haven	2/0	1/7
Billericay	1/9½	1/5	Falmouth	1/10½	1/5½	Melton Constable	1/8½	1/4½	Thetford	1/9½	1/5
Birchington	1/10	1/5½	Fareham	1/11	1/6½	Melton Mowbray	1/11	1/6½	Thorpe Bay	1/11½	1/6½
Birkenhead	‡§2/1	¶	Faversham	1/10	1/5½	Merthyr	2/0	1/7	Todmorden	2/0	1/7
Birmingham C.B.	†2/0	††1/7	Felixstowe	1/11	1/6½	Middlesbrough	2/0	1/7	Tonbridge	1/10½	1/5½
Bishop Auckland	2/0	1/7	Filey	1/10½	1/5½	Middleton	2/0	1/7	Torquay	1/11½	1/6½
Bishop's Stortford	1/11	1/6½	Fleetwood	2/0	1/7	Middlewich	1/11½	1/6½	Totnes	1/10	1/5½
Blackburn	2/0	1/7	Flint	2/0	1/7	Milford Haven	1/10½	1/5½	Trowbridge	1/9	1/4½
Blackpool	2/0	1/7	Folkestone	1/10	1/5½	Morecambe	2/0	1/7	Truro	1/9½	1/5
Blyth	2/0	1/7	Frinton-on-Sea	1/10	1/5½	Morley	2/0	1/7	Tunbridge Wells	1/10½	1/5½
Bognor Regis	1/10	1/5½	Frome	1/9	1/4½	Mundesley	1/9	1/4½	Uppingham (Salop)	1/11½	1/6½
Bolton	2/0	1/7	Gainsborough U.D.	1/11	1/6½	Nantwich	1/11½	1/6½	Uttoxeter U.D.	1/10½	1/5½
Bournemouth	1/11	1/6½	Gateshead	2/0	1/7	Nelson	2/0	1/7	Wakefield	2/0	1/7
Bracknell	1/10	1/5½	Gillingham (Kent)	1/11	1/6½	Newark-on-Trent	1/11½	1/6½	Walsall C.B.	2/0	1/7
Bradford	2/0	1/7	Glossop	2/0	1/7	Newbury	1/10	1/5½	Walsden	2/0	1/7
Bradford-on-Avon	1/9	1/4½	Gloucester	1/11½	1/6½	Newcastle-on-Tyne	2/0	1/7	Walton-on-Naze	1/10	1/5½
Braintree	1/10	1/5½	Godalming	1/10	1/5½	Newcastle-u.-Lyme	2/0	1/7	Ware	1/11½	1/6½
Brentwood	1/11½	1/6½	Goole	2/0	1/7	New Forest	1/10	1/5½	Warminster	1/9	1/4½
Bridgwater	1/10½	1/5½	Gosport	1/11½	1/6½	Newmarket	1/10	1/5½	Warrington	2/0	1/7
Bridlington	1/11½	1/6½	Grantham M.B.	1/11	1/6½	Newport, Mon.	2/0	1/7	Warwick M.B.	2/0	1/7
Brighouse	2/0	1/7	Gravesend	1/11½	1/6½	Newport Pagnell	1/10	1/5½	Wellington R.D.	1/11½	1/6½
Brighton	1/11	1/6½	Great Yarmouth	1/10	1/5½	Northampton C.B.	2/0	1/7	Welwyn	1/11	1/6½
Bristol	2/0	1/7	Grimsby	2/0	1/7	Norwich	2/0	1/7	Welwyn Gar. City	2/0	1/7
Broadstairs	1/10	1/5½	Guildford	1/10	1/5½	Nottingham	2/0	1/7	Wells (Norfolk)	1/8½	1/4½
Bromsgrove U.D.	1/11½	1/6½	Guilsborough	1/10½	1/5½	Nuneaton	2/0	1/7	West Bromwich C.B.	2/0	1/7
Buckley	2/0	1/7	Halifax	2/0	1/7	Oakham U.D.	1/10½	1/5½	Westcliff-on-Sea	1/11½	1/6½
Bungay	1/8	1/4	Hanley	2/0	1/7	Oldham	2/0	1/7	Weston-super-Mare	1/11	1/6½
Burnham-on-Crouch	1/8½	1/4½	Harpenden	1/11	1/6½	Ormskirk	2/0	1/7	Weybridge	1/11	1/6½
Burnley	2/0	1/7	Harrogate	2/0	1/7	Oxford	1/11½	1/6½	Weymouth	1/10	1/5½
Bursiem	2/0	1/7	Hartlepools	2/0	1/7	Oxted	1/10½	1/5½	Whitby	1/11	1/6½
Burton-on-Trent C.B.	2/0	1/7	Harwich	1/10	1/5½	Paignton	1/11½	1/6½	Whitstable	1/10	1/5½
Bury	2/0	1/7	Haslemere	1/10	1/5½	Peterborough (Borough)	1/11½	1/6½	Widnes	2/0	1/7
Bury St. Edmunds	1/9½	1/5	Hastings	1/10	1/5½	Plymouth	2/0	1/7	Wigan	2/0	1/7
Buxton	1/11½	1/6½	Hatfield	1/11½	1/6½	Pontefract	2/0	1/7	Wigton	1/10½	1/5½
Byfleet	1/10½	1/5½	Haywards Heath	1/10	1/5½	Pontypridd	2/0	1/7	Willington	2/0	1/7
Cambridge	2/0	1/7	Hednesford	1/11½	1/6½	Port Talbot	2/0	1/7	Wilmslow	2/0	1/7
Canterbury	1/10	1/5½	Hemel Hempstead	1/11	1/6½	Portsmouth	1/11½	1/6½	Winchester	1/10½	1/5½
Cardiff	2/0	1/7	Henley-on-Thames	1/10	1/5½	Preston	2/0	1/7	Windermere	1/10½	1/5½
Carlisle	2/0	1/7	Hereford	1/10	1/5½	Pulborough	1/10	1/5½	Windsor	1/11	1/6½
Carnforth	2/0	1/7	Herne Bay	1/10	1/5½	Ramsgate	1/10	1/5½	Wisbech	1/9½	1/5
Castleford	2/0	1/7	Hertford	1/11½	1/6½	Reading	1/11½	1/6½	Witham	1/10	1/5½
Caterham	2/0	1/7	Heysham	2/0	1/7	Redditch U.D.	1/11½	1/6½	Woking	1/10½	1/5½
Chard	1/9	1/4½	Hitchin	1/11	1/6½	Redhill	1/10½	1/5½	Wokingham	1/10	1/5½
Chatham	1/11	1/6½	Hoddesdon	1/11½	1/6½	Ripon	1/10½	1/5½	Wolverhampton C.B.	2/0	1/7
Chelmsford	1/11½	1/6½	Holt (Norfolk)	1/8½	1/4½	Rochdale	2/0	1/7	Woodbridge	1/9½	1/5
Cheltenham	1/11	1/6½	Horley	1/10	1/5½	Rochester	1/11	1/6½	Worcester C.B.	1/11½	1/6½
Chepstow	1/11½	1/6½	Horsham	1/10	1/5½	Rugby M.B.	2/0	1/7	Workington	1/10½	1/5½
Chertsey	1/11	1/6½	Horwich	2/0	1/7	St. Albans	1/11½	1/6½	Worksop	1/11½	1/6½
Chester	2/0	1/7	Huddersfield	2/0	1/7	St. Helens	2/0	1/7	Worthing	1/10	1/5½
Chesterfield M.B.	2/0	1/7	Hull	2/0	1/7	St. Neots	1/9½	1/5	Wrexham	1/11½	1/6½
Chichester	1/10	1/5½	Hunstanton	1/9	1/4½	Saffron Walden	1/9	1/4½	Wroxham	1/9½	1/5
Chorley	2/0	1/7	Huntingdon	1/9½	1/5	Salisbury City	1/9½	1/5	Wycombe	1/11	1/6½
Cirencester	1/9½	1/5	Ilfracombe	1/10	1/5½	Salisbury Plain	1/11	1/6½	Wymondham	1/9	1/4½
Clacton	1/10	1/5½	Ingatestone	1/10½	1/5½	Sawbridgeworth	1/10½	1/5½	Yeovil	1/10½	1/5½
			Ipswich	1/11½	1/6½				York	2/0	1/7

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/-½
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowances. In all districts throughout the country the basic rate of wages for women engaged on craft processes is 1/6½ per hour after the conclusion of a probationary period of three months. During the probationary period the rate of wages is first month 1/0½ per hour, second month 1/2½ per hour, and third month 1/4½ per hour. For all women carrying out work other than on craft processes, 1/3 per hour.

For Building Trade Wages in Scotland, see page 431.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
Fire Hard Stocks	4 16 0
Second Hard Stocks	4 9 0
Mild Stocks	3 16 0
Single Rough Stocks	3 10 0
Common Stocks	3 0 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

	London Rated Stations per 1,000	Site in London Area, North of Thames per 1,000
2½ in. Phorpres. A discount of 6d. 1,000 only per 1,000 monthly account.	s. d.	s. d.
Pressed	57 0	67 0
Keyed	59 0	69 0
Single Bullnose	77 0	87 0
Rustics	77 0	87 0
Whites	77 6	87 0

	£ s. d.
Best blue Pressed Staffs. (London Stns.)	11 12 0
Do. Bullnose (London Stns.)	12 2 0
Blue Wire Cuts (London Stns.)	10 9 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.		£ s. d.
2½ in. 10 0 0	3 in.	12 0 0

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed Stretcher	D'ble Str'tch'rs	38 10 0
	D'ble Headers	35 10 0
	One side&two ends	39 10 0
Headers	Two sides&one end	40 10 0
Quoins, Bullnose and 4½in. Flats	Splays and Squints	38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white, Other colours. Hard Glaze, £5 10s. extra over white.

ADD LEVY ON BRICKS, 3/– per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered on site London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

	s. d.		s. d.
2" per yd. sup. ..	2 8	3" per yd. sup. ..	3 6
2½" " "	2 11	4" " "	3 10

CLINKER CONCRETE.

2" per yd. sup. ..	1 11	3" per yd. sup. ..	2 6
2½" " "	2 3	4" " "	3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½" " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	3 10

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 8	12" x 9" x 3"	3 6
12" x 9" x 2½"	2 11	12" x 9" x 4"	3 10

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. .... per ft. cube	4 7
Do. do. delivered on road waggons as above stations ..... per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappled random blocks .. per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto ..... "	2 8
2 in. selected random flags.. per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 7s. 6d. Moulded, 8s. 6d. Small section cills and copings, 11s.

SAND.

Thames Ballast	11s. 6d. per yd.	delivered 2 miles radius Paddington.
Pit Ballast	10s. 0d. " "	
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¾ in. Shingle	10s. 6d. " "	
¾ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

	Standard £ s. d.	Specification £ s. d.
Best British Portland Cement, delivered London area.		
6 ton loads and upwards site .... per ton		2 11 0
1 to 6 tons site		2 14 0
Alongside Vauxhall in 80-ton lots		2 8 6
"Ferrocrete" Rapid Hardening Cement—		
6 ton loads and upwards site		2 17 0
1 to 6 tons site		3 0 0
Alongside Vauxhall in 80-ton lots		2 14 6
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton on ordinary "Blue Circle" prices.		
"Colorcrete" Nos. 1 and 2. Coloured rapid Hardening Portland Cement in 6 ton lots	4 11 0	
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.		
"Snowcrete" White Portland Cement (in free paper bags)	11 5 0	
Under one ton ..... per cwt.	0 13 2	
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 tons lots and upwards	3 11 0	
Plus packages at current prices. Super Cement (Waterproof), bags extra.	4 1 0	

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.

Less than one ton 1s. 9½d. nett each.

Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.		£ s. d.
Roman Cement 8 10 0	Keene's Cement, White	7 0 0
Parian Cement 7 0 0	" " Pink	6 10 0

Cementone Colours for cement according to tints, per cwt. from £3 5s. 0d.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual £ s. d.		£ s. d.	
24 by 12	45 5 0	18 by 10	24 0 6
22 by 12	37 17 6	18 by 9	22 12 0
22 by 11	34 2 6	16 by 10	21 10 6
20 by 12	33 0 0	16 by 8	16 12 6
20 by 10	30 5 0		

KING

1 King-Alloy Rolled Steel Section.
2 Domed Top Sheds All Moisture.
3 Correct Trolley Clearance.
4 Anti-Rust Finish.
5 Flat Running Treads For Long Life.
6 Lateral Movement For Easy Running.
7 Tecalemit Pressure Lubrication.

IF YOUR DOORS ARE FITTED WITH
KING DOOR TRACK
THEY ARE ALWAYS RUNNING IN
TIP TOP GEAR
GEO. W. KING LTD
HARTFORD WORKS HITCHIN HERTS
PHONE HITCHIN 960 (10 LINES)

PLASTER.

	£ s. d.		s. d.
Coarse, Pink	4 2 6	Sinapite, Coarse	4 11 6
" White ..	4 10 0	" Finish	4 19 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime ..	3 7 6	Grey Stone Line Chalk Lime	3 1 0 / 3 1 0
Granite Chippings	2 0 0	Hair per cwt. ..	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12s. 6d. 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£6 12 9
Ditto hand-made ditto	7 19 9
Ornamental ditto	8 7 0
Hip and valley tiles—Hand-made	16 4
(per dozen) —Machine-made	15 7

HARD WOOD.

I INCH AND UP THICK.

Average price for prime quality	s. d.		Foot cube. £ s. d.
Dry English Wainscot Billets	16 0	to	0 18 0
Dry Slavonian Billet Wainscot ..	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap, Figured Oak			0 13 0
Jap, Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue ..... per cwt.			5 0 0
Liquid glue ..... per gallon			1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes 2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. / 1 in. by 9 in.	71 0 0

	Per square. s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.

	per square. s. d.
¾ in.	40 0
¾ in.	45 3
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.

M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/–	51/– per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
50/–	72/– per doz.

S.D. STOP COCKS FOR IRON.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
33/–	48/–	86/–	209/–	281/–	456/– per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
45/–	77/6	123/–	240/–	372/–	624/– per doz.

DOUBLE NUT BOILER SCREWS.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/–	24/–	36/–	56/– per doz.

HEAVY CROYDON BALL VALVES.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.
72/–	115/–	144/–	288/–	384/– per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/–	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/9	13/6	25/–	37/–	46/– per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½×6 lbs.	1½ × 6 lbs.	2 × 7 lbs.	3 × 7 lbs.
Lead P.	26/–	34/–	55/–	92/– per doz.
Lead S.	34/–	41/–	67/–	115/– per doz.

SOLDER.—Plumbers', 1/7. Tinmen's, 2/1. Blow pipe 2/6 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)
See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£24	0	0
Plain Compound Girders	26	10	0
Stanchions	29	0	0
In Roof Work	35	0	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	23	5	0	½ in.	21	15	0
⅜ in.	22	15	0	½ in. to 2½ in.	21	5	0
½ in.	22	5	0				

WROUGHT TUBES AND FITTINGS.
Deliveries from works.
Deliveries from London stock further 2½% gross.
10/17

	Tubes. ½"/6" %	Tubulars, and ½"/6" %	19/24" %	Flanges. ½"/2" %	2½"/6" %
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ½"/⅜" inclusive, charged extra of 5% less gross.
Fittings. Figs. 25/34 5% less gross discount.
Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.G. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.
Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

	cwt.	qr.	lbs. in 9 fts.	per yard.	Bends.	Branches.
3 in.	0	3	14	6/0	7/3	11/6
4 in.	1	1	17	8/7	8/2	14/5
5 in.	1	2	18	10/7	14/9	22/3
6 in.	2	0	1	12/9	17/0	29/8

Gaskin, 75/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	18	7	6
IRON.—Staffordshire Marked Bars	19	7	6
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0

	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0

	Per ton £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil (5 galls.) per gallon	0	7	0
Boiled Linseed Oil (5 galls.) "	0	7	4
Genuine Ground English White Lead, per cwt.	3	11	9
Genuine White Lead Paint, 14-lb. tins free, per cwt.	4	16	6
Genuine Red Lead "	2	18	6
Linseed Oil Putty (Kegs extra) "	1	5	3
Utility Putty (Packages returnable) "	1	3	9
Size, XD quality ..... f/kn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/0½	2/0	1/11½	1/11	1/10½	1/10
Labourers	1/7	1/6½	1/6½	1/6	1/5½	1/5½

Aberdeen	A	Dumfriesshire	A2	Inverness	*	Perthshire	A2
Ayrshire	A	Dundee	A	Inverurie	A1	Peterhead	A1
Banff	B	Dunoon	A	Kincardineshire	A2	Renfrewshire	A
Berwickshire	A2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A2
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A2
Doune	A	Forfarshire	A2	Moray and Nairn	B	Stewartry	A2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A2	Stornoway	A2
Dumfries	A1	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

*This town has its own rates: Masons, 1/9½; Carpenters, 1/9½; Slaters, 1/9½; Plumbers, 1/10; Plasterers, 1/10½ but 1/11 is paid owing to the scarcity at present; Painters, 1/9½ and Labourers, 1/5.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 429

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	"	0	18	0
Fine Copal	"	1	0	0
Pale Copal	"	1	2	0
Pale Opal Carriage	"	1	6	0
Best do. do.	"	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	"	1	0	0
Fine Copal Cabinet	"	1	4	0
Fine Copal Flatting	"	1	2	0
Hard Drying Oak	"	1	0	0
Fine Hard Drying Oak	"	1	1	6
Fine Copal Varnish	"	1	2	6
Pale do.	"	1	14	0
Best do.	"	1	4	6
Best Japan Gold Size	"	1	14	6
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	38	10	0
Soil pipe	42	10	0
Compo pipe	47	10	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton £18 0 0.

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THE SCOTTISH BUILDER

NEW BUILDINGS

CHAPELTON. — Plans prepared for new buildings at Dykehole Farm, for which the architect is Andrew Mickle, Dykehole, Carluke.

GLASGOW.—Plans in hand for restoration of classrooms, at £700, at St. Teresa's school, for which the architect is John McNab, 129, Bath-st., Glasgow.

BUSBY.—Plans prepared for alterations and additions at "Phillipshill," for which the architect is A. George Grater, Busby.

L.M.B.A.; Central Area No. 3,

The monthly meeting of Central Area No 3 of the L.M.B.A. was held at the Holborn Restaurant on May 15. The meeting was very well attended, and the chairman, Mr. Wilfred E. Mullen, F.I.O.B., gave a cordial welcome to the guest speaker, Mr. E. C. Harris, F.S.I., who spoke on the report of the recent Building Mission to the U.S.A. A vote of thanks to Mr. Harris was proposed on behalf of the meeting by Mr. F. J. Gayer, F.I.O.B.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3½
24 oz. Clear or "R" quality	5
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.
Over 500 ft. super of all kinds.

	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ¼ in.	7½d.
Rough cast double rolled, ⅜ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cas: double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Cast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
" " 32 oz.	4	0
" Cast, ¼ in. thick	0	9½
" " ⅜ in. thick	1	0
" " ½ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
" " " ⅜ in. thick	1	0
" " " ½ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅛ in. thick— To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass: ¼ in. thickness	2	0
⅜ in. "	3	0
½ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4⅞ in. × 3⅞ in.	2	9	each nett
P.B. 2—5½ in. × 5½ in. × 3⅞ in.	2	6	"
P.B. 3—7½ in. × 7½ in. × 3⅞ in.	3	6	"
P.B. 32—7½ in. × 7½ in. × 3⅞ in.	3	6	"

Radiused Corner Bricks to match up with—

P.B. 2	4	6	each nett
P.B. 3	6	0	"
P.B. 32	6	0	"

IN PARLIAMENT

Land for Allotments.

MR. KEELING asked the Minister of Town and Country Planning whether the Government proposed to place on local authorities a statutory obligation to provide a minimum number of allotments, with security of tenure, as recommended by Lord Justice Scott's Committee.

MR. W. S. MORRISON said that planning authorities were already required by statute to consider what provision ought to be made in their planning schemes for the reservation of land for allotments, and he had already drawn the attention of planning authorities to the need for making proper and adequate provision of land for this purpose. The suggestion that a statutory obligation should be imposed upon local authorities to provide a minimum number of allotments would be impracticable owing to the wide variation in the local demand.

Chalk Cob.

MR. WAKEFIELD asked the Parliamentary Secretary to the Ministry of Works if he was aware of the cheapness of building cottages in what was technically known as chalk cob; and what steps he was taking to use this method and material in all chalk areas for building agricultural cottages.

MR. HICKS said that facilities were being given for an experiment in the use of this material, which would be carefully watched from the point of view of costs and general utility as a contribution to the problem of post-war housing.

Water and Bathrooms.

SIR ADRIAN BAILLIE asked the Minister of Health if his records gave the number of dwellings in rural areas in which no water was laid on and the number of dwellings in urban areas which had no water and no bathrooms, respectively; and whether such reconditioning was part of his post-war housing policy in view of the fact that without proper water supplies it was impossible to eliminate slum conditions.

MR. WILLINK said he regretted that precise information was not available under these various heads, but it was estimated that about 30 per cent. of the population of rural districts lived in houses which were not connected to or within easy access of a water main. The improvement of unsatisfactory living conditions in both town and country by all possible means, including, of course, adequate water supplies and the provision of bathrooms, would form a most important part of post-war policy.

Prefabricated Houses.

MR. GRANVILLE asked the Minister of Health if it had been decided to commence quantity production of prefabricated steel-framed houses of the type known as the Churchill house, which had been exhibited in London, before practical tests of living experience in summer and winter conditions had been applied.

MISS HORSBRUGH, who replied, said that the prototype of the emergency house had not yet been approved and no decision to begin quantity production had been taken. As a result of many valuable comments and suggestions it was intended that it should be modified in certain respects, but the Government would lay itself open to severe criticism if it delayed the programme for the production of emergency houses in the manner suggested in the question. The Minister of Works had throughout had the scientific advice and collaboration of the Building Research Station, which was fully qualified to deal with all such problems.

In reply to SIR WILLIAM EDGE, MR. DALTON said that enough utility furniture to supplement the built-in metal furniture and to enable a family of three to live in reasonable comfort in an emergency house similar to the one now on show would cost about £45 at the present controlled prices.

SIR THOMAS MOORE asked when the Portal prefabricated houses, as now on exhibition, would be available for general use, and in what quantities.

MR. HICKS said that the first question was the approval of the prototype. Thereafter, the timing and commencement of manufacture must necessarily depend upon the availability of materials and capacity, upon which the war effort had first call. It would take about six months after approval of the prototype for jigs and tools to be got ready. Once production started it would take about three months to work up to full production, which would be of the nature of from 2,000 to 2,500 houses a week.

COLONEL RAYNER asked the Minister of Town and Country Planning whether it was anticipated that schemes involving in one place the erection of large numbers of prefabricated houses would be vetted by his department from the point of view of landscape amenities.

MR. W. S. MORRISON: Yes, Sir.

Building Societies.

MR. LAWSON asked the Secretary to the Treasury if he was aware of the amalgamations of building societies that had taken place recently or were projected, and if he would take steps to prevent the creation of a monopoly in the field or, alternatively, nationalise the building societies.

MR. ASSHETON said that the answer to the first part of the question was in the affirmative. As regarded the second part, it was quite clear that the changes in question involved no danger of a monopoly in the building society movement.

War Factories.

In reply to MR. ELLIS SMITH, MR. GARRO-JONES, for the Minister of Production, said: The total of approved expenditure from public funds on war factory buildings since the beginning of the rearmament period is about £830,000,000; the amount expended on Government factories is about £180,000,000; and the amount expended on shadow factories and agency schemes is about £252,000,000. The amount of capital assistance to contractors under contributory schemes is about £20,000,000. These figures relate to capital expenditure covering buildings and plant.

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FUTURE CONSTRUCTION

The Editor welcomes authentic information for this section from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

MAY 29.

Montgomeryshire E.C.—(1) Erection of canteen kitchen and dining-room at Llandinam School; (2) construction of brick kitchen at Llandyssil C.E. School. T. G. Davies, D. of E., County Ed. Offices, Newtown. Dep., £2 2s.

MAY 30.

Bournemouth T.C.—Permanent repairs to properties. W. L. Clowes, B.E. and Architect.

JUNE 2.

Carlisle T.C.—Repairs at 13, Cumberland-st. City S., 18, Fisher-st.

JUNE 3.

Belper R.D.C.—Erection of 2 pairs of houses at Park Nook, nr. Quarndon, N. Blackwell Wood (L.), 34, Irongate, Derby. Dep., £2 2s.

Birkenhead T.C.—Conversion of No. 18, Woodland-rd., Rock Ferry, into self-contained flats. B.E. and S.

JUNE 5.

Hornsey T.C.—Works at maternity and child welfare centres: (1) Structural alterations and decorations at Centre No. 2, Burgoyne Hall, N4; (2) Conversion of premises at Fortis Green, N.10, to Centre No. 5; (3) Erection of perambulator sheds at Centres Nos. 1, 2 and 5. J. H. Melville Richards, B.E. and S. Dep. £2.

Leeds Housing Committee.—(a) Re-erection and full completion of 110, Fairfield-cres., Westfield estate Contract 199; (b) repairs at 87, Whitehall-rd., Contract 199. R. A. H. Livett, Housing Director, Priestley House, Quarry Hill, Leeds, 9. Dep. £2.

Luton E.C.—For alterations to sanitary conveniences at Surrey-st., and Dunstable-rd. infants' schools. B.E. Dep. £1 1s.

Sheffield Estates Committee.—Conversion and adaptation of following properties: (1) 9 and 11, Grange-rd., repairs and alterations to form 4 flats; (2) 106 and 108, Whitham-rd., repairs and alterations to form 5 flats; (3) 3, Whitham-rd., repairs and alterations to form 2 flats; (4) 180, Bramhall-la., reinstatement of existing premises; (5) 84, Fawcett-st., alterations to form one house and 2 flats; (6) 7, Priory-pl., alterations to form 2 flats. W. G. Davies, City Architect. Dep. £1.

JUNE 7.

Dunfermline T.C.—For work in various trades for extensions at Maternity Hospital, St. Leonard's Hill. C. R. Douglas & Son, Prudential-chbrs., East Fort, Dunfermline. Dep. £1 1s.

JUNE 10.

Eccles T.C.—For repairing and adapting small number of houses. B.E. and S.

JUNE 14.

Salford T.C.—Erection of prefabricated building, together with site works, foundations and finishings at Summerville estate. City E.

JUNE 15.

***Lewes T.C.**—External painting of 254 houses at Landport estate and 12 flats at Priory-st. C. T. Butler (L.), B.S.

JUNE 16.

Manchester Transport Committee.—Erection of temporary boiler house at motor 'bus garage. City Architect. Dep. £1 1s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

MAY 31.

Accrington.—External painting at Victoria Hospital. H. Sanderson, B.E.

Cudworth U.D.C.—External painting of 136 houses at Darfield-rd. estate. D. J. D. Woodhall, E. and S.

JUNE 5.

Mansfield E.C.—Internal cleaning and painting work at various schools. A. L. Maylan, Acting B.E. Dep. £1 1s.

JUNE 8.

Leyton T.C.—Internal and external painting and repairs to school buildings. A. P. Howell, M.Inst.C.E., B.E. and S. Dep. £1.

JUNE 12.

Montgomeryshire E.C. — For redecorating various schools. D. of E., County Ed. Offices, Newtown.

JUNE 14.

Liverpool T.C.—Internal and external painting, also limewashing at certain schools. City E.

JUNE 24.

Shrewsbury.—External painting and internal redecoration work at County Council Hospital.

A. G. Chant, County Architect, 5, Belmont, Shrewsbury.

NO DATE.

Wellington (Salop) U.D.C.—External painting of 457 houses on various estates. E. and S.

ENGINEERING, IRON AND STEEL

MAY 31.

†**Hemel Hempstead R.D.C.**—Sinking 12-in. borehole at Markyate. Howard Humphreys & Sons, Consulting E., 7, Eldon-sq., Reading. Tenders by June 12.

ROAD, SEWERAGE AND WATER WORKS

MAY 31.

Malden T.C.—Surface dressing. B.E.

Witney R.D.C.—Laying of water mains. S., 103, High-st., Witney.

JUNE 6.

Shepshed U.D.C.—Tarspraying of roads. C., Council Offices.

JUNE 7.

Droylsden U.D.C.—Paving repairs. E. and S.

JUNE 12.

Stockport C.B.—Taking up tram track and relaying new concrete bed. E. B. Baxter, A.M.Inst.T., General Manager, Transport Offices, Mersey-sq.

PUBLIC APPOINTMENTS

MAY 30.

Leeds Housing Dept.—(1) Two Principal Assistant Architects. (2) One Senior Structural Engineer. (3) One Senior Assistant Surveyor. Application forms from R. A. H. Livett (A.), Housing Director, Priestley House, Quarry-hill, Leeds, 9.

MAY 31.

Isle of Wight E.C.—Headmaster of new Junior Building School. £500 p.a., plus war bonus. Application forms from A. L. Hutchinson, D. of E., Ed. Offices, County Hall, Newport, I. of W. (Stamped addressed foolscape envelope.)

Northern Polytechnic.—Full-time post of Teacher of Building Construction and Allied Subjects. Forms of application from R. H. Currell, C., Northern Polytechnic, Holloway-road, N.7.

JUNE 2.

Exeter T.C.—City Architect. Must be over 35 and member of R.I.B.A. £900-£50-£1,000, plus cost of living bonus. Applications (no forms issued) to C. J. Newman, T.C., Exeter.

***Ipswich School of Technology.**—(a) Head of Department of Building. Scale £460-£20-£550. (b) Staff (i) Building subjects, (ii) English Subjects, (iii) Mathematics and General Science. Forms of application from J. T. Hill, Secretary for Ed., Tower House, Ipswich.

JUNE 3.

***Cornwall C.C.**—Two Senior Architectural Assistants. Forms of application from County Architect, County Hall, Truro.

Manchester T.C.—Temporary Town Planning Assistants. R. H. Adcock, T.C.

North Riding E.C.—Assistant Master for Maths. and General Science, Scarborough T. Inst., to begin Sept. 1. Burnham scale. Application forms from Principal, Technical Inst., Westbourne-grove, Scarborough.

Somerset C.C.—Temporary Class II Architectural Assistants. £310-£10-£350, plus war bonus. R. O. Harris (A.), County Architect, Park-st., Taunton.

JUNE 5.

Eastbourne. — Assistant Master to teach Building Subjects, including Plumbing. Applications to Headmaster, Junior Technical School and Evening Institute, "The Grange," St. Anne's-rd., Eastbourne.

JUNE 8.

***Newcastle-on-Tyne E.C.**—(a) Graduate to take science, technical drawing and mathematics; (b) history or geography graduate to take general English Subjects; (c) Handicraft Instructor in wood and metalwork. Forms from T. Walling, D. of E., City Ed. Office, Northumberland-rd.

JUNE 14.

West Sussex C.C.—Two Masters at Junior Technical School for Building, Bognor Regis. Forms of application from D. of E., County Hall, Chichester.

JUNE 23.

***West Ham C.B.**—Temporary Assistant Building Surveyor. £400, plus £49 10s. 9d. war bonus. Forms from B. S., Town Hall, West Ham, E.15.

JUNE 30.

Belfast Education Authority.—Head of Building Trades Department at College of Technology. £600-£25-£700 or £800. Application form from J. Stuart Hawnt, D. of E., Education Office, College of Technology, Belfast.

GENERAL BUILDING WORK

Alnwick.—R.D.C. to build four houses at Felton. Plans by J. T. Robson, Council Offices, S.

Altrincham.—T.C. approved: Extensions to laboratory, Holly Bank, Barrington-rd., for J. F. Moseley, The Laurels, Barrington-rd.

Altrincham. — Building Committee of Altrincham, Bowdon and Hale Social and Health Centre propose social, cultural and health centre building.

Altrincham.—Maternity and Child Welfare Committee to acquire properties known as "Thornholme" and "The Homestead" for new centres.

Bolton.—T.C. propose: Sanitary accommodation at Townley's hospital; alterations to cottages for nurseries at Hollins Cottage Homes; alterations at Lostock Hall farm.

Bowland.—R.D.C. approved four houses at Laneside and Sawley, for J. E. Fattorini.

Bromsgrove.—R.D.C. approved dairy, Fockbury Mill, for M. Crawford.

Bury.—T.C. approved office and houses, for W. B. Ovenden & Sons, Ltd.

Buxton.—Derbyshire E.C. propose extensions at Cavendish High school for Girls for two additional classrooms.

Carlisle.—N.A.A.F.I. to erect Services club, at £10,000.—Alterations proposed to premises for F. W. Woolworth & Co., Ltd., Victoria Viaduct.

Croydon.—B. of E. approved play centre at Purley Oaks school, at £272, and at Kingsley school, at £407, for E.C.

Darlington.—H. B. Richardson, 3, Skinnergate, prepared plans for alterations at 191, Northgate, for W. T. Avery, Ltd.—E.C. to erect sculleries at Kendrew-st. school, at £247, and at Arthur Pease school, at £400.

Hull.—E.C. propose reconstruction of Hopewell-rd. school, at £5,000; sculleries at Fifth-av. and Endyke-la. schools, at £2,398.

Kidderminster.—T.C. propose public conveniences at Horsefair, at £450.

Macclesfield.—Youth Committee propose Young People's College and Youth Centre. T. T. Young, secretary.

Manchester.—T.C. approved: Four flats at Atwood-rd., Didsbury, for A. Shemash, A. R. Walsingham, architect, 50, High Grove-rd., Cheadle, Ches; alterations to restaurant at King-st., for Fuller's, Ltd., E. G. Kent, architect, Parkway-chbrs., Parkway, Welwyn City, Herts; alterations to premises, A. McDonald, architect, 637, Mauldeth-rd. West, Chorlton-cum-Hardy; workrooms, etc., Cheetham, P. Cummings (F.), architect, 3, Appleby Lodge, Wilmslow-rd., Rusholme.

March.—T.C. approved plans for four houses at Grandford Farm, for F. J. Martin & Son.

Middlesbrough.—T.C. propose repairs to No. 2, Devonshire-rd., at £290. C. Gorman, B.E.

Newcastle-on-Tyne.—T.C. approved nursery at Brunell-ter., for City Council. Plans by City Architect, 18, Cloth Market.—Hetherington & Wilson, Westgate-rd., are architects for ablution block and sprinkler tank house.—Store room and emergency staircase to be erected to plans by Hindmarsh & Co., 10, Neville-st.—Page, Son & Bradbury, King-st., South Shields, prepared plans, which have been approved, for erection of large factory and offices.

Newcastle-under-Lyme.—T.C. approved: Extensions for Aerated Water Co., Ltd.; alterations to premises, for J. Titley, Chatcull Hall, Eccleshall.

Oldham.—T.C. propose repairs to roofs at St. Margaret's High school, Roundthorn, administrative block and No. 4 Home at Children's Homes, Royton.—T.C. approved rebuilding bakery, for F. Lees, 296, Lees-rd.—M.O.W. to erect club premises at Clegg-st.

Penrith.—Cumberland C.C. propose maternity hospital, at £13,000.

Preston.—Committee of Lancashire and Cheshire Association for Boys' Clubs, propose to adapt house and grounds for club and recreational centre.

Rainford.—Lancashire E.C. propose temporary branch library at Church-rd., at £860.

Rochdale.—T.C. propose: Extensions at Birch Hill hospital and provision of health centres; erection of Infectious Diseases hospital; improvements at Marland hospital and Springfield sanatorium.

Salford.—T.C. approved: Conversion of 8, Rutland-dr., Broughton, into three flats; 36, Bury Old-rd., Broughton, into four flats, and premises at Elmwood Park-st., into two flats; additions and sanitary conveniences to laundry, Sydney-st., and Goulden-st., Pendleton, for Croft Laundry Co., additions to hostel, Eccles Old-rd., Pendleton.

Southport.—T.C. approved adaptations for conversion of Sunnyside Mansions, Knowsley-rd., into convalescent home, for Board of Management of Wigan Royal Albert Edward Infirmary.

Stockton-on-Tees.—Plans approved for extensions for Ashmore, Benson, Pease & Co., Ltd.

Urmston.—U.D.C. approved factory. Plans by B. Waterhouse (F.), 134, Deansgate, Manchester 3.

West Hartlepool.—J. J. Dobson, West Hartlepool, is architect for proposed alterations at Upper Church-st., for Newcastle-on-Tyne Savings Bank.

Wolverhampton.—T.C. approved scheme for child guidance clinic.

BRITISH RESTAURANTS AND CANTEENS

Bolton.—T.C. propose improvements at B.R. at Clarence-st.

Brighouse. — T.C. propose central school kitchen at Clifton.

Coventry.—E.C. propose kitchen block at Hen-la. school.

Dewsbury.—E.C. propose school kitchen at Earlsheaton Senior school.

Hebburn.—Schools meals centre proposed. Plans by M. of W.

Lancashire.—E.C. propose school central kitchen at Senior school, Blackrod.

Mansfield.—E.C. propose school kitchen at Moor-la., Ravensdale and St. Philip's schools.

Morecambe and Heysham.—T.C. approved school kitchens at Lancaster-rd. and Heysham C. of E. schools.

Northumberland. — E.C. propose central kitchen at Whitley Bay. Plans by W. W. Tasker, County Architect, County Hall, Newcastle-on-Tyne.

Oldham.—E.C. to erect self-contained kitchen at Werneth.

Radcliffe.—T.C. approved canteen at Wilton Mills, for Lancashire Cotton Corporation, Ltd., Blackfriars House, Parsonage, Manchester 3.

Salford.—Governors of Royal Technical College, Peel Park, to erect kitchen and dining-room adjacent to college.

Stockport.—T.C. approved dining-room at Mersey-st., Portwood, for E.C.

Wakefield.—T.C. approved dining centres at Snapethorpe and Sandal schools.

Wellingborough.—Northants E.C. propose canteen kitchen at Elsden-rd. school.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Bromsgrove.—Painting, etc., work, of 74 houses at Churchfields, Broad-st., Millfields and Stourbridge-rd. sites, for U.D.C. F. W. Goodman, S.: *H. L. Wilton, Ednall-la., Bromsgrove, £441.

Deptford.—For repairs at 1-9, Chipley-st., for T.C. *H. T. Else, 8a, Brackley-rd., Beckenham, £1,309.

Dunston-on-Tyne.—For additions to works: *Bewley & Scott, Dunston-on-Tyne.

Lichfield.—For repairs at "The Cottage," Chesterfield, nr. Lichfield, for R.D.C. J. G. Rimand, registered architect, Rural Council House, Lichfield: *Merry Bros., Chase Town, £350.

¶London (Air Ministry).—The Directorate of Contracts has placed the following contracts to the value of £500 or over for week ended May 20.

Surfacing work: Val de Travers Asphalt Paving Co., London, N.6; Cawood Wharton & Co., Ltd., Oxford.

Civil engineering work: M. J. Gleeson, Ltd., North Cheam, Surrey; Yarwoods (Altrincham), Ltd., Altrincham, Cheshire; W. and J. Glossop, Ltd., Exeter; Bridgewater Bros., Ashtead, Surrey; and John Howard & Co., Ltd., Poole, Dorset.

Installation work: Bigg and Remington, Ltd., London, N.W.7.
Building work: Sir Alfred McAlpine & Son, Ltd., Hooton, Cheshire.
Site clearance work: S. G. West, Reading.

Heating work: Z. D. Berry & Sons, Ltd., Esher, Surrey.

¶London (Ministry of Works).—Contracts placed by M.O.W. during week ending May 18:—
London: Building work, Selection Construction Co., Ltd., 6, Wood-mews, W.1.
Carmarthenshire: Building work, T. E. Richards, Northampton Yard, Swansea.
Devonshire: Building work, Dudley Coles, Brookland Lodge, Bainbridge-av., Hartley, Plymouth.
Essex: Building work, Jas. C. Flaxman & Sons, Ltd., 114, Southchurch-rd., Southend-on-Sea.
Glamorgan: Civil engineering, Pridmore & Co., Albion-chbrs., Swansea.
Lancs: Civil engineering, Yarwoods, Ltd., Moss Lane Bridge, Altrincham, Ches.
Middlesex: Building work, Limpus & Son, Ltd., Kingston Hill, Kingston-on-Thames.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended May 13:—
Midlothian: Miscellaneous work, Wm. Paris, Jnr., Broxburn, West Lothian.
Yorks: Miscellaneous work, J. Wimpenny & Co., Ltd., Linthwaite, nr. Huddersfield.
Monmouthshire: Miscellaneous work, J. Thomas & Sons, Ltd., Newport, Monmouthshire.
Glamorgan: Miscellaneous work, Wm. John (Llantrisant, Ltd.), Llantrisant, Glamorgan.
Oxfordshire: Roadwork, Bristowes Tarvia, Ltd., London, S.W.7.
Wilts: Flooring work, The General Asphalte Co., Ltd., London, S.W.1; Ragusa Asphalte Paving Co., Ltd., London, W.1; Western Trinidad Lake Asphalt Co., Ltd., Bristol; The Rock Asphalte Co., Ltd., London, W.6.
Sussex: Miscellaneous work, Saunders (Contractors), Ltd., Burgess Hill, Sussex.
Dorset; Painting work, The Electro Depositing Co., Ltd., Wolverhampton.

London. — For covering steam pipework at Horton Hospital, for L.C.C.: *Kitson's Installations, Ltd., £903 13s. 3d.

Manchester.—Additions to bakery, Miles Platting, for Horrock's Bakery Ltd.: *Henry Green & Son, Ltd. (Builders), Stocks House, Cheetham Hill-rd., Cheetham, Manchester 8; additions to paint works, Hulme: *Smith & Allcock, Ltd., 471, Chester-rd., Old Trafford, Manchester 16; additions to work: *J. Gerrard & Sons, Ltd., Pendlebury-rd., Swinton, Manchester.

Middlesbrough.—Alterations to premises at Lothian-rd., for establishment of home, for T.C.: *Direct labour, £825.

Northumberland.—Internal redecoration at Dilston Hall maternity home, for C.C.: *Thomas Ellis, Hexham, £240.

Northumberland.—For central kitchen at Shankhouse: *Cramlington Co-operative Society, Cramlington, £1,481; for central kitchen at Benton-sq.: *J. M. Reid, 1, Hayward-av., Seaton Delaval, Blyth, £1,739; for central kitchen at Bedlington colliery: *J. W. Urpeth, Front-st., Bedlington, £2,266.

Stockton-on-Tees.—Painting of 224 houses at Primrose Hill estate, for T.C.: *Direct labour.

Worcs.—Erection of maternity and child welfare centre and school medical services at West Heath, for E.C. H. Rowe & Son, 38, Foregate-st., Worcester, County Architects: *Midland Building Trust, Ltd., 388, Lodge-rd., Winson Green, Birmingham 18, £720.

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